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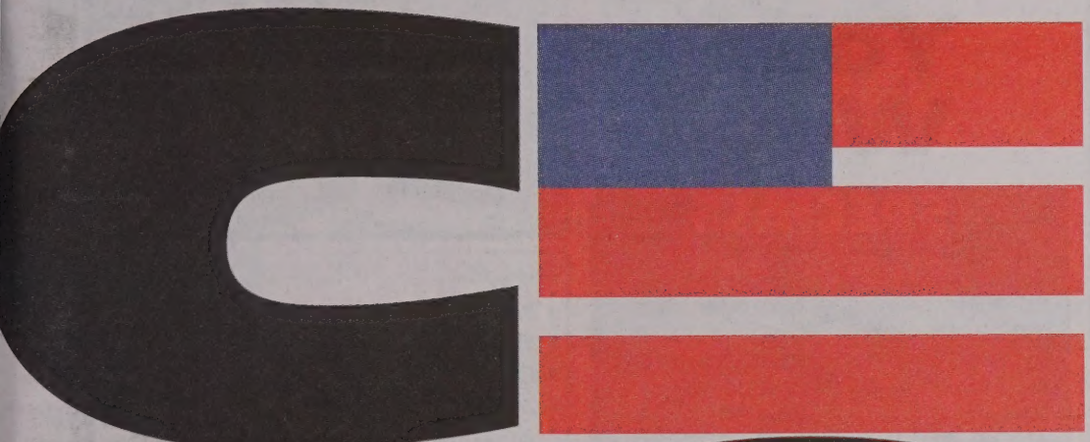

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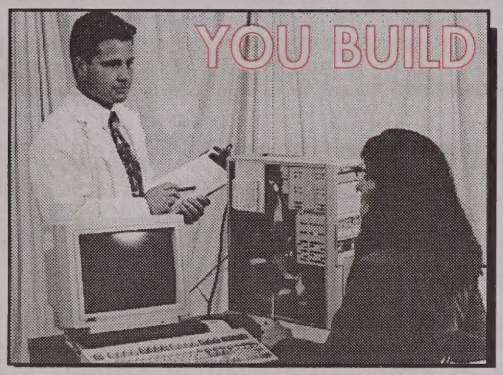

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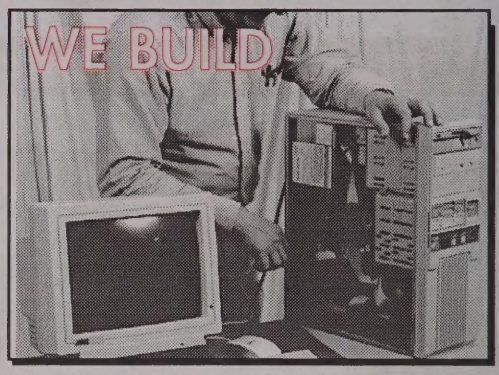

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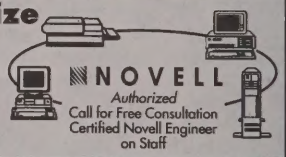

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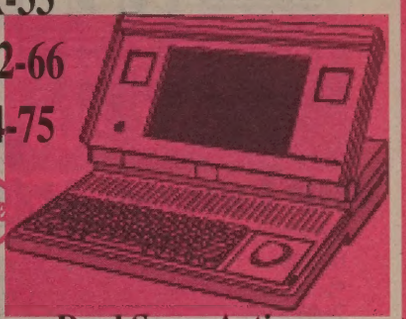

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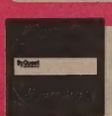

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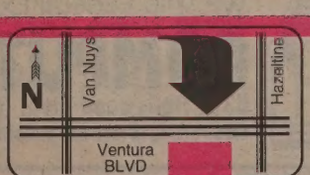

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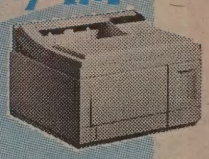

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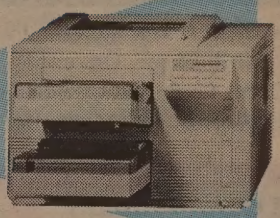

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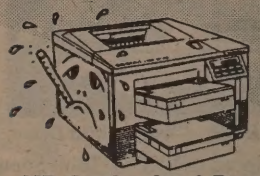

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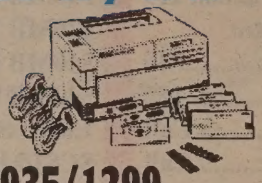

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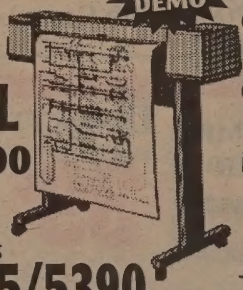

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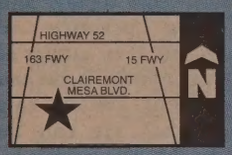

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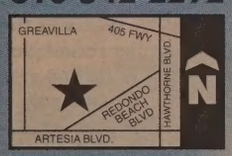

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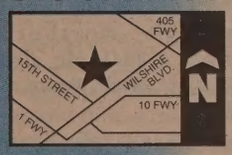

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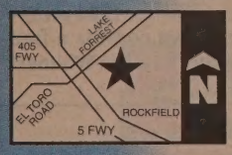

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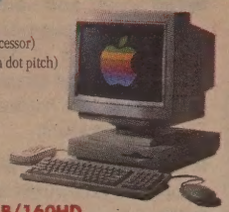

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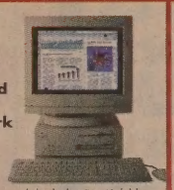

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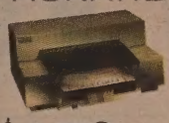

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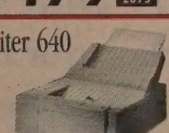

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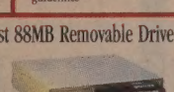

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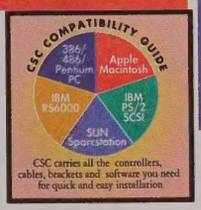
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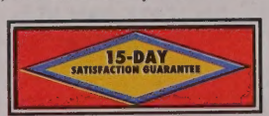

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BY PAUL HOFFMAN

Industry Insight

Rating The Ratings: Game Companies Form Dueling Standards

Hey, why make it easy on consumers? In response to increasing pressure from parents' groups and Congress, video game and computer game software manufacturers have formed ratings systems to inform consumers what is in the games that they are buying. However, the two groups have formed very different types of ratings organizations to serve their own needs.

For many years, a few parents have complained about the amount of sex and violence in the cartridge video games (primarily for the Nintendo and Sega systems) that their children bought or rented. There was no easy way to determine if a game was an "action" game with lots of simulated running and jumping or a violent game with lots of shooting and stabbing. The level of complaints rose significantly last year with the release of Mortal Kombat, which allows the player who has won to vanquish his or her (probably his) opponent in a particularly gruesome fashion.

Late last year, Congress started to hold hearings on the matter. A few more popular and violent games were released, and the furor continued. Hardware and software manufacturers of cartridge and CD-ROM system games decided to quell the furor by forming the Interactive Digital Software Association, which will soon start applying ratings to game software. These ratings give a rating for the appropriate ages for the games (three and up, six and up, thirteen and up, seventeen and up, and adults only). They will also give short reasons for the rating (violence, sex, "language," and other).

Two senators, Herb Kohl of Wisconsin and Joseph Lieberman of Connecticut, supported both the initial hearings and the IDSA. In fact, the senators sent a letter to major retailers strongly urging them to sell only games with the ratings. At this point, computer software manufacturers started to get quite worried, for a few reasons. The IDSA was set up for video games, which is a very different (and much larger) market than PC and Macintosh games, and the way the ratings process goes is much different from what the computer game software manufacturers want.

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Thus, the computer game manufacturers pulled together a half-dozen of their respective organizations, formed the Recreational Software Advisory Council, and devised their own rating system. The ratings from the RSAC differ from those from the IDSA in a few ways. Instead of a single age rating, they give values for how much violence, sex, and "language" is used in the game on a scale from 1 to 4. It is then up to the consumer to decide if they want to buy a game, say, with a 4 for violence and 2 for sex.

The ratings method goes deeper than the difference in styles. The IDSA has outside people perform its ratings based on storyboards given by the manufacturers. The RSAC, on the other hand, relies on the game manufacturer to answer a set of yes-no questions that are used to determine the 1-to-4 scale. Because of its use of others to do the rating, the IDSA charges $500 and can take up to a month to rate the software; the RSAC does not charge and validates the software's checklist in about a week. Both groups defend their methods as appropriate for their manufacturing markets, and both generally have criticisms of each other's methods.

Although Kohl and Lieberman have written Senate bills concerning ratings, they are not pushing them very hard in hopes that the industries take care of the situation themselves. They clearly support the IDSA model of outside raters, but may support the RSAC ratings as well if it is clear that game manufacturers do not cheat in order to get lower ratings (something that could also happen under the IDSA). Parents' groups

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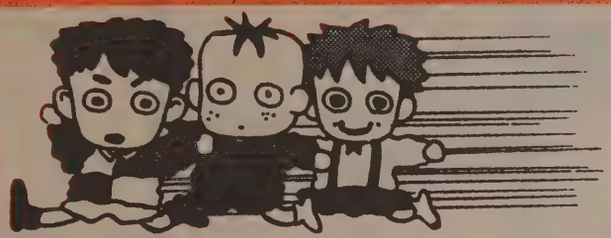

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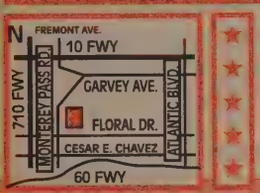

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will also be watching how the ratings go, and both boards have members from parents' and educational groups. It is likely that there will be a major review after the Christmas buying season to evaluate how well everything went and whether changes need to be made in either or both systems.

PC Graphics Board Manufacturers Set Up Consortium To Prevent Ratings Cheating

About a year ago, PC graphics accelerator boards became an almost undifferentiable commodity. They all had the same features (many resolutions and numbers of colors available), and they all sped up graphics rendering. The only way to tell if one was worth $100 or $200 more than another was to look at its speed rating.

Unfortunately, the manufacturers started playing games with the ratings so that their boards looked faster than they really were. There are many ratings systems, each usually sponsored by a magazine, that were supposed to measure the boards in "real world" use, but the manufacturers learned how to tweak the accelerator chips and the drivers for the boards to perform well on those tests. Pretty soon, the ratings became meaningless.

That situation is about to change. Most of the chip makers and board manufacturers have agreed to form a group called the Clean PC whose mission is to make the graphics ratings rational and difficult to fudge. The Clean PC's charter calls it a self-policing industry association, and companies that cheat on their ratings will be publicly flayed. The group will not propose any new benchmark, but simply use many of the benchmarks that are already popular and look for anomalies or questionable results.

By using existing rating systems, the group sidestepped the possible wrath of many popular magazines that had invested a great deal of time and money promoting their ratings system. In addition, it made the Clean PC's job of spotting anomalies easier: if a board has average performance on three tests and in unscientific "real life" runs, but incredibly good performance on a fourth test, the manufacturer may have some explaining to do. The results of the testing, including a list of any boards that are questionable, will be published regularly.

The results should be available to consumers by early winter, in time for COMDEX. This gives manufacturers time to clean up their graphics driver code to eliminate some of the questionable cheats they put in. Since most popular board manufacturers use chips produced by just a few companies, it is likely that most boards will fall into a few tight bands of performance numbers.

An interesting aspect of the Clean PC will make consumers even happier. Because it is a voluntary organization, not every board maker has to join. However, Company A can pay to have Company B's board tested for compliance even if Company B is not a member. This way, a company won't have an advantage by not joining Clean PC. Given that the magazines sponsoring the benchmarks will see lists of questionable boards, it will almost certainly force all graphics board companies, not just Clean PC members, to clean up their acts.

Hopefully, the need for Clean PC goes away within six months, and the group only exists to prevent companies from

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starting to cheat again. After one or two companies get caught and are exposed, it is unlikely that many others will do so. A few years ago, the Norton SI rating was considered very important for PC sellers; now, only a few use the rating since it became widely known how to cheat to get higher ratings. The Clean PC initiative may make the same kind of change for graphics board manufacturers.

New Types Of RAM Starting To Make Headway

To most PC and Macintosh users, there is only one type of RAM: the DRAM (dynamic RAM) used as the main memory for programs. More advanced users know that their systems usually contain a second type of RAM: video RAM or static RAM, which is faster than DRAM but more expensive. It is used to make graphics faster on systems.

The design of DRAM has not changed much in fifteen years. In the past few years, however, a few companies have introduced new designs for RAM that are much faster than DRAM but cost only a little more. These designs have generally not been adopted, however, due to inertia on the part of PC motherboard designers who do not want to use the new interfaces.

Of the new designs, the one that has garnered the most press in the chip industry is the Rambus RDRAM design from Rambus, Inc. Recently, Rambus got a big boost when Nintendo designated it as the RAM to be used in its forthcoming 64-bit video game system called Ultra-64. Although still more than a year off, the announcement will help Rambus since Nintendo will probably order millions of the chips for the system.

Rambus and its competitors have also been making slow inroads with graphics cards makers who want fast video boards at lower cost. That market, which is huge, now has a new competitor, MoSys, which designed its new RAM specifically for real-world graphics applications. Although its specification is not final, MoSys has already gotten commitments from the major graphics chip companies to support its new system.

The advent of a faster RAM that is only slightly more expensive than DRAM could make a big difference in the PC market in the next few years. Today, even fast PCs still cannot show good video due to slow displays, and faster RAM could make a big enough difference to make video acceptable on PCs. Even in main memory, faster RAM could make a difference for memory-intensive operations that involve lots of data, such as searching a database. Now that the bus wars are a bit more settled, the next frontier for competition in high-end PC makers might be the kind of RAM they use.■

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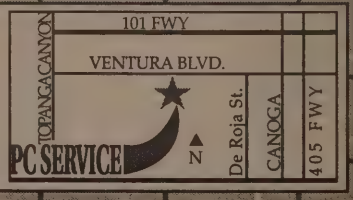

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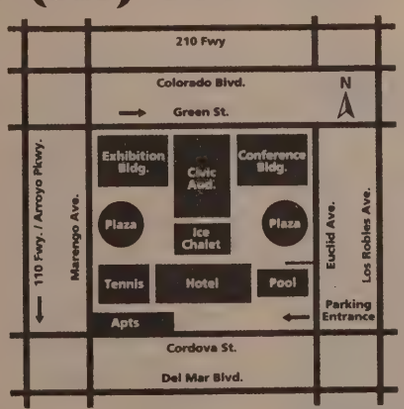

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Industry Insights *continued...*

Riding the coattails of last month's euphoric rally, the MicroTimes Stock Index notched an impressive 493-point, 10.8% gain during the monthly trading period ended August 19.

In sharp contrast, the Dow Jones Industrial Average etched out a nominal 20.07-point, .54% gain en route to a close of 3755.11.

➳ IBM gained $6.75 a share last month to a new 12-month high of $68.13. Merrill Lynch raised its third-quarter and fourth-quarter earnings estimates for the company; S.G. Warburg upped its 12-month price range for the stock to between $80 and $85 a share; S&P reiterated its "accumulate" rating on IBM last week.

➳ Shares of Apple Computer were in high demand last month after the #2 US personal computer maker said fiscal third-quarter profit from operations rose to $59.9 million, or 50 cents a share, from $10.6 million, or 9 cents a share, in the year-ago quarter. Revenue for the three-month period rose 15% to $2.15 billion. Apple's CEO attributed the rise to an improved financial model, controlled costs and good management of working capital. Following the positive earnings release, Apple Computer, which closed out the month at $34.88 (up 13%), was raised to "hold" from "avoid" at Bear Stearns, and raised to "neutral" from "unattractive" at PaineWebber. Both brokerage firms raised their respective earnings estimates for Apple for 1994 and 1995. Another significant development at Apple since our last stock report: the company's Power Macintosh was ranked superior to Pentium computers according to a study conducted by Ingram Laboratories.

➳ Compaq was also popular with shareholders during the last four weeks, as its share price gained $5.88, or 19.1%, to close at $36.63. The stock benefited from Compaq's assurances to Wall Street that its products are still in strong demand and that it has cleared up its alleged excess inventory. Moreover, Compaq officials said they believe third-quarter sales could eclipse second quarter's revenues of $2.49 billion.

➳ Even Digital Equipment got into the act, as its stock price appreciated $3.13, or 16.1%, to $22.50. As expected, the embattled company posted a large fiscal fourth-quarter loss from operations of $160.4 million vis-a-vis a profit of $113.2 million in the comparable year-ago period. Unexpectedly, however, DEC's share price rallied on the news, as investors seemed relieved that the results weren't even worse. For the quarter, the company posted a net loss of $1.75 billion, following a $1.2 billion charge to terminate another 20,000 jobs.

HIGH TECH STOCKS SOARED TO THE FORE IN AUGUST

EXCH	COMPANY		TICKER SYMBOL	CLOSING PRICE 07/22/94	CLOSING PRICE 08/19/94	NET CHANGE IN PERIOD	PERCENT CHANGE IN PERIOD	P/E RATIO	ANNUAL DIVIDEND RATE	ANNUAL DIVIDEND YIELD	ANNUAL HIGH	ANNUAL LOW
	SOFTWARE											
OTC	Adobe		ADBE	31.19	32.25	1.06	3.41	26	0.20	0.62	34.50	16.25
OTC	Aldus		ALDC	30.38	32.00	1.63	5.35	28	0.00	0.00	34.50	16.25
OTC	Autodesk		ACAD	52.00	58.25	6.25	12.02	23	0.48	0.82	61.75	37.00
OTC	Borland		BORL	10.50	14.13	3.63	34.52	-	0.00	0.00	20.75	8.50
OTC	Informix		IFMX	20.13	20.88	0.75	3.73	24	0.00	0.00	24.50	14.25
OTC	Lotus		LOTS	31.25	41.81	10.56	33.80	25	0.00	0.00	86.50	29.75
OTC	Microsoft		MSFT	50.56	54.88	4.31	8.53	29	0.00	0.00	56.38	35.63
OTC	Novell		NOVL	16.13	15.13	-1.00	-6.20	-	0.00	0.00	26.63	14.00
OTC	Oracle	(H)	ORCL	36.75	40.50	3.75	10.20	42	0.00	0.00	41.00	22.88
OTC	Software Publishing		SPCO	3.88	4.00	0.13	3.23	-	0.00	0.00	8.63	3.00
OTC	Symantec		SYMC	12.25	13.00	0.75	6.12	-	0.00	0.00	20.50	9.88
	HARDWARE											
OTC	Apple		AAPL	31.00	34.88	3.88	12.50	21	0.48	1.38	38.50	22.00
OTC	AST Research		ASTA	14.50	17.00	2.50	17.24	10	0.00	0.00	33.00	12.50
NYS	Compaq		CPQ	30.75	36.63	5.88	19.11	14	0.00	0.00	39.88	17.28
NYS	Digital Equipment		DEC	19.38	22.50	3.13	16.13	-	0.00	0.00	43.13	18.25
OTC	Dell	(H)	DELL	26.00	34.13	8.13	31.25	-	0.00	0.00	36.25	15.13
NYS	Hewlett-Packard		HWP	75.25	87.88	12.63	16.78	16	1.20	1.37	93.63	64.38
NYS	IBM	(H)	IBM	61.38	68.13	6.75	11.00	30	1.00	1.47	68.13	41.25
NYS	Silicon Graphics		SGI	21.50	25.13	3.63	16.86	27	0.00	0.00	26.88	18.00
OTC	Sun Microsystems		SUNW	22.13	25.50	3.38	15.25	13	0.00	0.00	31.38	18.25
NYS	Xerox	(H)	XRX	101.00	107.13	6.13	6.06	-	3.00	2.80	107.38	69.88
NYS	Tandy		TAN	36.50	39.63	3.13	8.56	16	0.60	1.51	50.75	29.13
	CPU'S											
NYS	Advanced Micro Devices		AMD	25.88	28.75	2.88	11.11	10	0.00	0.00	32.50	16.75
OTC	Intel		INTC	57.88	63.44	5.56	9.61	11	0.24	0.38	74.50	55.88
NYS	LSI Logic	(H)	LSI	27.00	30.25	3.25	12.04	21	0.00	0.00	30.50	13.00
NYS	Motorola		MOT	49.50	52.63	3.13	6.31	24	0.28	0.53	54.88	42.13
	COMMUNICATIONS											
NYS	AT&T		T	54.25	53.13	-1.13	-2.07	17	1.32	2.48	63.38	49.50
NYS	BellSouth Corp.		BLS	60.38	60.88	0.50	0.83	23	2.76	4.53	63.88	53.00
OTC	MCI		MCIC	23.81	22.75	-1.06	-4.46	19	0.05	0.22	29.63	21.38
NYS	Northern Telecom	(H)	NT	30.75	34.75	4.00	13.01	44	0.36	1.04	35.13	23.75
NYS	Pacific Telesis		PAC	31.25	31.88	0.63	2.00	28	2.18	6.84	34.50	29.41

KEY: NYS = NEW YORK ASE = AMERICAN OTC = OVER THE COUNTER
(H) = NEW HIGH REACHED IN PERIOD (L) = NEW LOW REACHED IN PERIOD

MARKET DIARY:

ADVANCES	28
DECLINES	3
UNCHANGED	0
NEW HIGHS	6
NEW LOWS	0

MOST ACTIVE ISSUES:

LARGEST DOLLAR GAINER	Hewlett-Packard	$ 12.63
LARGEST DOLLAR LOSER	AT&T	$ -1.13
LARGEST PERCENTAGE GAINER	Borland	34.52 %
LARGEST PERCENTAGE LOSER	Novell	-6.20 %

	CLOSE 07/22/94	CLOSE 08/19/94	NET CHANGE IN PERIOD	PERCENT CHANGE IN PERIOD
MICROTIMES STOCK INDEX	4577.29	5070.19	492.90	10.77
DOW JONES INDUSTRIAL AVERAGE	3735.04	3755.11	20.07	0.54
STANDARD & POOR'S 500 INDEX	453.11	463.68	10.57	2.33
N.Y.S.E. COMPOSITE	250.24	255.81	5.57	2.23
NASDAQ COMPOSITE	716.68	742.43	25.75	3.59

CLOSING QUOTES FOR GRAPH:

DATE	MICRO TIMES	DOW JONES
02/04/94	4728.74	3871.42
03/04/94	5081.75	3832.30
04/05/94	4878.26	3675.41
04/29/94	4639.86	3668.31
05/27/94	4709.29	3757.14
06/24/94	4238.94	3636.94
07/22/94	4577.29	3735.04
08/19/94	5070.19	3755.11

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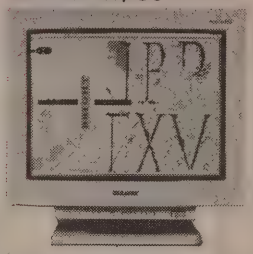

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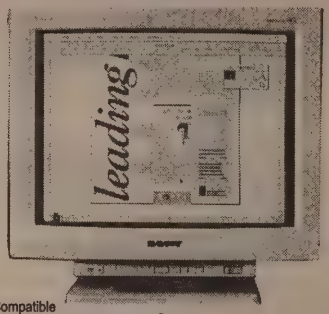

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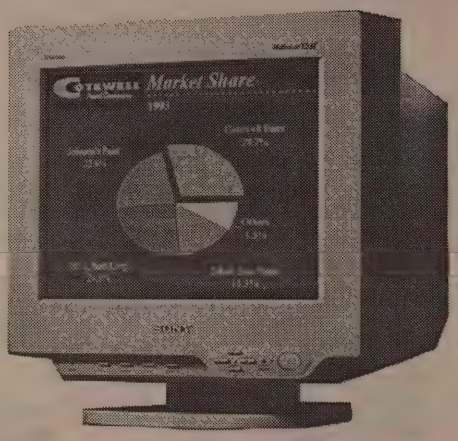

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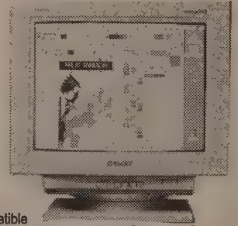

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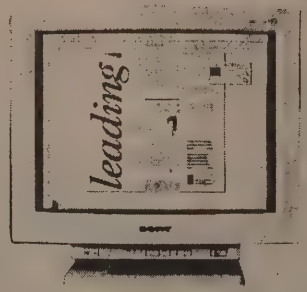

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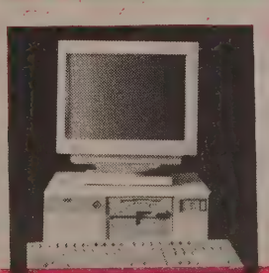

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REALIZABLE FANTASIES • BY JIM WARREN

Shocking Political Communications

Government is leaping onto the "information superhighways," but sometimes it seems more like naive children playing on a freeway.

Politicians' Arrogance

What do you think of your local, state and federal elected "representatives" who have tax-funded phones in their offices, which they often use to contact the media for self-promotion, which numerous special-interest lobbyists readily use, which they eagerly disclose to anyone who might give them money—certainly including vote-buyers from outside of their districts—but which they refuse to disclose to the "mere peons"—the citizens and voters whom they are supposed to be serving? I'm not talking about their private direct phone numbers; I'm talking about the phones that their staff uses all the time.

Well, that's exactly how some deadbeat incumbents deal with their fax numbers that are paid for with our tax dollars. Fortunately, this horse-'n'-buggy view that their fax numbers should only be for their use is slowly dying, especially as these arrogant incumbents are replaced by modern-minded and responsive representatives—but this arrogance is still far too widespread, especially given (1) the proliferation of fax-modems in millions of voters' personal computers, and (2) the speed with which legislation changes and hearings are scheduled.

Snail-mail (paper mail delivered by the US Postal Service) is too slow to permit any real citizen-participation in much of the process of our own governance—faxes, telegrams and hyper-expensive FedEx-type delivery are often the only options for useful written input.

Look in the phone book under "Government" and see if your local, state and federal elected representatives have listed their fax numbers, along with their quaint, old-fashioned voice-phone numbers. If they haven't, call and ask for it.

Politicians who won't give you their fax numbers obviously don't wish to represent you.

Politicians' Email

And since you're calling them, ask for their electronic-mail address.

The President and Vice President have had email addresses for more than a year—and their computer will send a form response in seconds, pending later human review by a staffer, just as happens with other written communications that arrive on pre-landfill media.

By year's end, most members of Congress should have email addresses, similarly processed by an auto-responder and, hopefully, by later staff review. And state legislators are starting to have public email addresses, overseen by staff. Perhaps someday, even California's Governor will permit incoming email communications—even after election season.

POLITICIANS WHO WON'T GIVE YOU THEIR FAX NUMBERS OBVIOUSLY DON'T WISH TO REPRESENT YOU.

And more and more local agencies and elected officials are permitting similarly-modern citizen communications.

Ask politicians who want your vote to get email addresses, and include them, along with their fax numbers, on their business cards, stationery and in their phone book listings.

Political Email Images

It's sometimes said that, in Hollywood, "you are what you wear." And it's well-known that such preoccupation with appearance permeates politics. But such trite value judgements are even inflicted on citizens' communications to politicians—and now impact the value of citizens' email to their legislators and other elected representatives.

As we all bumble into modern (online) communications, a curious aberration is appearing: Email from citizens to politicians—including emailed messages that are faxed via an email fax-server*—supporting or opposing a given piece of legislation, is seen as being less significant than identical text in paper letters or faxes that appear to be copies of paper letters (those few that arrive not too soon and not too late, but nonetheless manage to remain pertinent to the legislation in its current, rapidly-amended form).

Here's the usual scenario: Senator Gladhand introduces a bill. Advocates send messages of support to Sen. Gladhand, who gleefully copies them to the members of each successive committee that will consider the bill—to show its broad public support and help committee members waver in its favor. (Sen. Gladhand may or may not circulate letters of opposition with equal enthusiasm.)

New Information-Technology Governor's Council

Governor Pete Wilson signed an executive order [W-93-94] in July, creating the Governor's Council on Information Technology, to develop "a blueprint by which state and local jurisdictions can use information and telecommunication technology to reinvent government, including:

- Steps to improve academic performance;
- Ways to prepare our workforce for new occupations brought about by the information revolution;
- How to simulate success from the private sector in using techology to reduce costs and improve service in the public sector;
- How to streamline government regulatory processes;
- How to provide government services more conveniently, effectively and efficiently;
- How to make information readily, inexpensively, and broadly accessible."

The Order further stated that, "Members of the Information Technology Council will be appointed by the Governor."

Let's Include a Citizens' Advocate

We hope that the Governor's Council will include on his Council at least one technically-knowledgeable, ardent citizen advocate of computer-aided public access to government.

Of course, we can think of no better person to do that than our own futures columnist, Jim Warren, who has already received national recognition for his work in that area.

Agree or disagree, you might quickly suggest your nominee(s) to:

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Re: Governor's Council on Information Technology
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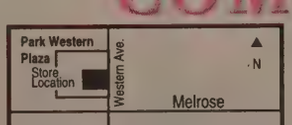

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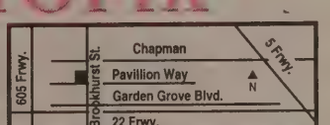

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But such support messages traditionally have different value, depending on their format: Petitions are the least significant. Form postcards and form letters also count for very little, but are better than nothing. Individualized letters—in paper or faxed form—count much more. Individualized messages from organizations count the most, by far.

Now, email is entering this mix. And even messages that are cogent, articulate and individualized, when sent by email and printed out and copied to committee-member targets, are apparently often being evaluated as having little-more value than form letters. "Well, they just all look alike!"

Sad and appallingly infuriating, but true–if you want your messages to legislators to carry the most weight, you better make them look like "real" letters.

*There are an increasing number of email servers to which one can send an email message that includes a fixed-format fax phone number, which will cause the server to then actually convert the email message to a fax and transmit it to the (usually local) fax number. Unfortunately for political faxes, such email-originated faxes look "too much" like email to be "counted" as much as faxes that look like copies of "real" letters.

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Death to Voter Info

You may recall that California Senate Bill 758 (Hayden, D-Hollywood) would have required that candidates and campaigns who receive significant loot—uh, contributions—must file their already-required campaign-finance disclosures in computerized form, and would have required the Secretary of State to make the information available without charge via the public computer nets (i.e., via the Internet). (This would implement a 28-page generic plan that I proposed in early January, promptly and strongly supported by acting Secretary of State Tony Miller. Copy available from me, upon request.)

Tom Hayden and his chief aide contacted me and said they wanted to carry the legislation. They took it on... and then spent most of the spring on his campaign for the Democratic gubernatorial nomination.

Eventually, the bill came before Diane Martinez's (D-East LA) Assembly Committee on Elections. Martinez, still in a snit because Hayden hadn't supported some pet bill of hers in the Senate, refused to support SB 758, and refused to allow its reconsideration after the June primaries (when Hayden could again pursue his senatorial responsibilities, full-time).

And poor, powerless Assembly Speaker Willie Brown (D-San Francisco) was entirely unable to get Ms. Martinez to change her mind—even though Secretary of State Tony Miller diligently pleaded for his assistance. Note: Brown appointed Martinez to chair this committee, which controls all political-reform legislation.

So, Californians can continue to remain functionally in the dark about who's paying how much to whom—except, of course, those who have the time to slog through the mountains of paper disclosures that fill Sacramento file cabinets.

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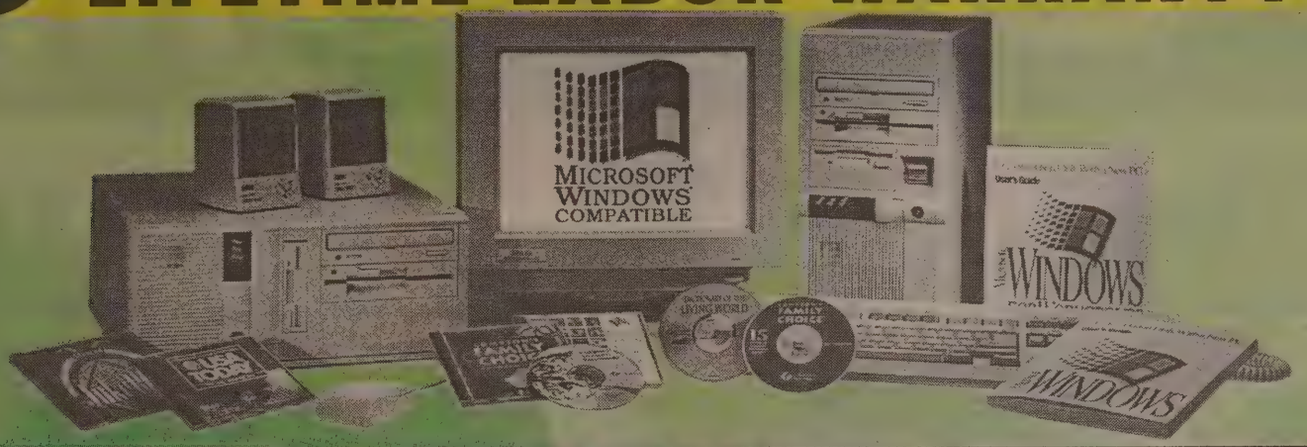

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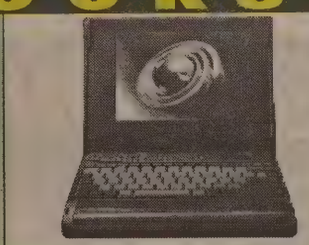

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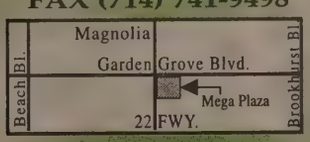

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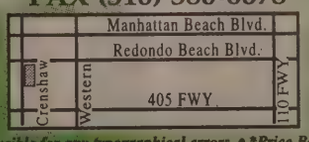

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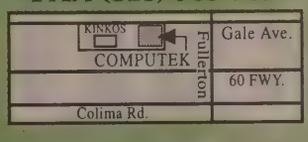

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PENS & PALMTOPS • BY MITSU HADEISHI

PDA Playhouse, Checks On The Go, And More

In light of the rather dismal sales figures of the Apple Newton and the general downturn in enthusiasm for pen-based palmtops recently, it's interesting to come across a book which discusses the present and future of PDAs (personal digital assistants) with untrammeled enthusiasm and faith. PDA Playhouse, by Rod Williams and Harry Leverette (published by the Waite Group), was evidently written before it became clear that the Newton was going to have a relatively lackluster consumer introduction; the authors focus on what they see as the bright future of the PDA industry, with particular emphasis on the Apple Newton design which, in their view, will spawn it. What makes this book intriguing is the fact that it looks not at the state of the PDA today, but rather at fanciful notions of what PDAs might someday be.

Despite the rather broad title, the basic ideas of the book seem to be inspired somewhat narrowly by the peculiarities of the Apple Newton design. Nevertheless, the authors describe a number of applications which are currently not possible on any PDA; the book reads a little bit as though it were a speculative study for Apple engineers. These ideas are illustrated quite effectively by a simple multimedia presentation which comes on a disk bundled with the book. Scenarios are presented—an airline traveler who might use a PDA to quickly look up local hotels and get a map of the area; a shopper who links to the inventory system of a supermarket to get instant updates of the merchandise available and its location; or a waiter who uses a PDA to keep track of orders and to communicate instantly with the kitchen. In most of these scenarios, the existence of an inexpensive wireless network in conjunction with an infrastructure that supports easy and seamless PDA use is assumed—of course, these things do not exist at present. Again, this is the old chicken and egg problem: If the services don't exist, then why buy it, and if people don't buy it, then why make services available?

Like others before them, Williams and Leverette are clear-sighted enough to point out that the first generation of PDAs will be much like the Apple Macintosh 128—great proofs of concept, but far too limited to be of much practical use. They also make the correct observation that at first the primary market for the PDA will be in vertical markets (rather than the consumer market). Of course, the question is, will the critical mass of services and users ever be reached to create a mass consumer market, and if so, when?

> If the services don't exist, then why buy it? And if people don't buy it, then why make services available?

The Mac 128 was a great breakthrough in software design, even if the product itself was not of much use from a practical standpoint. The Newton is also a marginally useful product for a variety of reasons. The authors correctly point out that one of the chief advantages of a PDA, i.e., its communications ability, is not built into the Newton. This fault is corrected, of course, in the up-and-coming General Magic-based Motorola Envoy, which doesn't bother with handwriting recognition at all, but focuses on communications capabilities.

Though published this year, some parts of the book are a bit dated; for example, an entire chapter is devoted to the Dylan language, recently released by Apple, which was originally intended to be used as a development language for the Newton. However, it has been two years since Dylan has been linked to the Newton project in any serious way. At present, Dylan implementations exist only for desktop computer systems, and there are no plans to port the language to PDAs.

All in all, the book seems to be aimed more at the PDA designer than it is at the general public; since most of the things discussed in the book are speculative, there isn't really much reason for the average consumer to be interested in it. But as a stimulus for a designer who might be looking for a way to find or create a market for a PDA-based service or software package, the book provides some interesting ideas and observations. Perhaps the best market for this book is as inspiration for the small wireless or Newton developer trying to find a niche for their expertise in an era when mass-market acceptance of PDA technology has not yet appeared.

Panasonic KX-RC100

Most people find the task of balancing their checkbook time-consuming and tedious. A number of solutions exist for this problem; Quicken is, of course, one of the most popular software packages designed to keep track of personal finances. The downside of this solution is that it is usually not run on a portable platform; typically it is run on PCs and other desktop machines.

A number of palmtops, however, will run this software: the HP 100LX will, for example, and the new HP 200LX has it built-in (that's actually the primary difference between the 200LX and the 100LX). The Tandy Zoomer also has a version of Quicken built-in. But these and other palmtops do not do one thing that the Panasonic KX-RC100 does: they don't print your checks for you.

The Panasonic KX-RC100 does not run Quicken or anything like it; it is a very simple machine, dedicated primarily to keeping track of your checkbook finances. What it does have is a built-in dot matrix printer, just the

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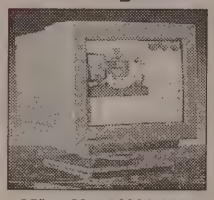

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Palmtops *continued...*

right size to print on standard wallet-sized checks. You open up the machine, put the check inside, close it, enter the check information, and hit the "print" key; the check comes spitting out of the side, ready to be endorsed. At the same time, the information you entered into the machine is recorded in the KX-RC100's memory.

You can store up to twenty-five payee names for quick recall, and you can manage two checking accounts. The unit will store up to one thousand check entries. You can also handle up to ten credit cards and account numbers, and keep track of up to six hundred entries there. Unfortunately you cannot really use this machine to replace your pocket organizer, because it only stores up to fifty telephone numbers. The battery pack is a rechargeable NiCd pack combined with a five-year lithium battery backup.

Measuring 1.25" x 7.25" x 3.25", it's certainly small enough to fit into a pocket; it's about the same overall size and shape as an HP 100LX. It's a bit hefty at .85lbs., but that's to be expected since it contains a built-in printer. The display is two lines by 19 characters across; not a very large display, but enough for its simple functions. An interface kit is available to transfer

A package costing more is not necessarily worth more to you if its complexity is so burdensome that it hinders more than helps.

data to a PC-compatible; no mention was made of a Mac connectivity kit. Other functions include a date and time indicator and a calculator.

I tried using the machine to print out some checks; it was quite straightforward, but took a full twenty seconds (after inserting the check into the machine, which took at least five or ten seconds); it didn't seem in any way faster than writing out the check by hand; perhaps slightly slower. The only advantage was that the information was being stored electronically at the same time. Because of this, I don't see that this machine really saves you very much time over, let's say, a pocket Quicken-based palmtop.

However, it is cheaper than the average Quicken-capable palmtop; it costs around $350 street. Unfortunately, though, because it is really not a replacement for your pocket organizer (due to its limited capacity), it would really only be appropriate for those people who either didn't want or need portable organizer functions, or those who are willing to have two separate palmtops (I doubt there are many of these folks around).

WinPad Delayed Further

As reported in an earlier column, the Microsoft WinPad standard, which had originally been expected to be integral to a series of Intel-based PDAs, has been set back; it's becoming more clear that this setback is going to be extensive. The Polar chipset, a 386-based design which was going to be the basis of a new series of PDAs this year, is more likely going to be used in lower-powered palmtop organizers instead. A 486-based PDA chipset may find its way into machines by this time next year, however.

171MB PCMCIA Drive

MiniStor Peripherals Corporation has announced the highest capacity PCMCIA drive ever produced; a 171MB Type III (10.5mm height) PCMCIA drive with Stac Electronics Stacker Anywhere data compression, giving it an effective capacity of 340MB when compression is enabled. The drive will retail for $599, and is expected to ship third quarter this year.

Other MiniStor Type III drives include a 260MB compressed-capacity drive for $499, and a 170MB compressed-capacity drive for $299. These drives are designed to withstand operating shocks of up to 200Gs and non-operating shocks of up to 900Gs. The new drive comes with a PocketSocket case for transportation, which gives it protection against shocks up to 1200Gs. MiniStor also sells the DockIt Socket, a PCMCIA slot and docking station for IBM AT-bus machines.

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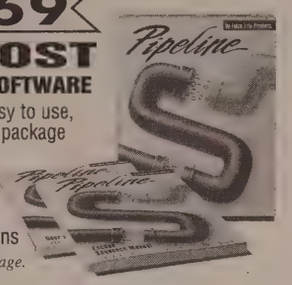

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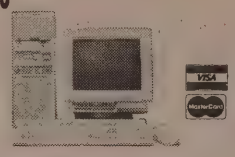

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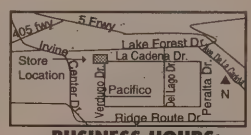

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Palmtops *continued...*

Cardwell Line Of PCMCIA Products

Cardwell International Corporation has announced a series of PCMCIA cards and related products. The CardBay-AT Card Drive supports up to four PCMCIA sockets in a variety of combinations; the bay supports type I, II, or III PCMCIA sockets, and will mount into any 3.5" or 5.25" drive bay. The product also features a speaker for fax/modem cards and includes the CardMaster plug-and-play compatibility support for Cardwell cards. Using the CardMaster software, "hot swapping" of Cardwell PCMCIA cards is automatically supported. Pricing for the bays ranges from $149 to $209. Cardwell also makes a Type I form factor Ethernet card for $229, including support for Banyan Vines, Microsoft LAN Manager, Novell Netware, Netware Lite, and Workgroups for Windows. The card has a data transfer rate of 10Mbps and a 64K on-board buffer, and can be used with either 10BaseT or 10Base2 connectors.

Cardwell also offers two Type II fax modem cards: a $169 9600 baud fax/2400 baud data modem and a $339 14.4kbps data/fax modem card. In addition, they have a family of PCMCIA flash memory cards with capacities ranging from 512K to 16MB, which feature a 100,000 write/erase cycle endurance capability. These cards range in price from $139 to $309. Their $249 SCSI card will run at 500K/second sustained data rate and a 1.2MB/sec burst rate. The card includes a 32K SRAM buffer for DMA emulation and will support hot insertion and removal in conjunction with Cardwell's CardMaster software. The card supports the ASPI standard and optional Corel SCSI software is available for an additional $30.

Finally, SRAM cards ranging in price from $149 to $339 are available in capacities from 512K to 2MB. Memory card prices do not include the $39 CardMaster or the $29 Flash File System software.

RESOURCES:

PDA Playhouse
Rod Williams and Harry Leverette
Published by The Waite Group
Corte Madera, CA

Ministor 340MB 1.8" PCMCIA drive
MiniStor Peripherals Corp.
2801 Orchard Pkwy.
San Jose, CA 95134
1-800-943-0165,
fax (408)434-0784

Cardwell PCMCIA Products
Cardwell International Corp.
110 Blue Ravine Rd., Ste. 156
Folsom, CA 95630-4712
(916)985-1880

Rancho Technology PCMCIA SCSI card
Rancho Technology, Inc.
10783 Bell Ct.
Rancho Cucamonga, CA 91730
(909)987-3966,
fax (909)989-2365

ST288VFC V.FAST PCMCIA fax/modem
SMART Modular Technologies
25531 Northport Loop West, Bldg. 3B
Fremont, CA 94538
(510)623-1231

Rancho PCMCIA SCSI Card

Rancho Technology, Inc. has announced the release of a new 16-bit Type II PCMCIA SCSI Card, the RT7000. This card is designed to draw low power, and will go into sleep mode when not being used. The card supports hot swapping and autoconfiguration. The card comes with a 33-pin PCMCIA to 50-pin SCSI-2 cable. An optional 50-pin Centronics SCSI cable is also available. The RT7000 is priced at $220, and large-quantity discounts are available.

V.FAST PCMCIA Fax Modem

SMART Modular Technologies has announced a $499 V.FAST-compatible high-speed PCMCIA fax modem card, the ST288VFC, capable of a rate of 28.8kbps for data and 14.4kbps for fax. The card draws 200mA while operating, and 4mA in "sleep mode" during no activity periods. ■

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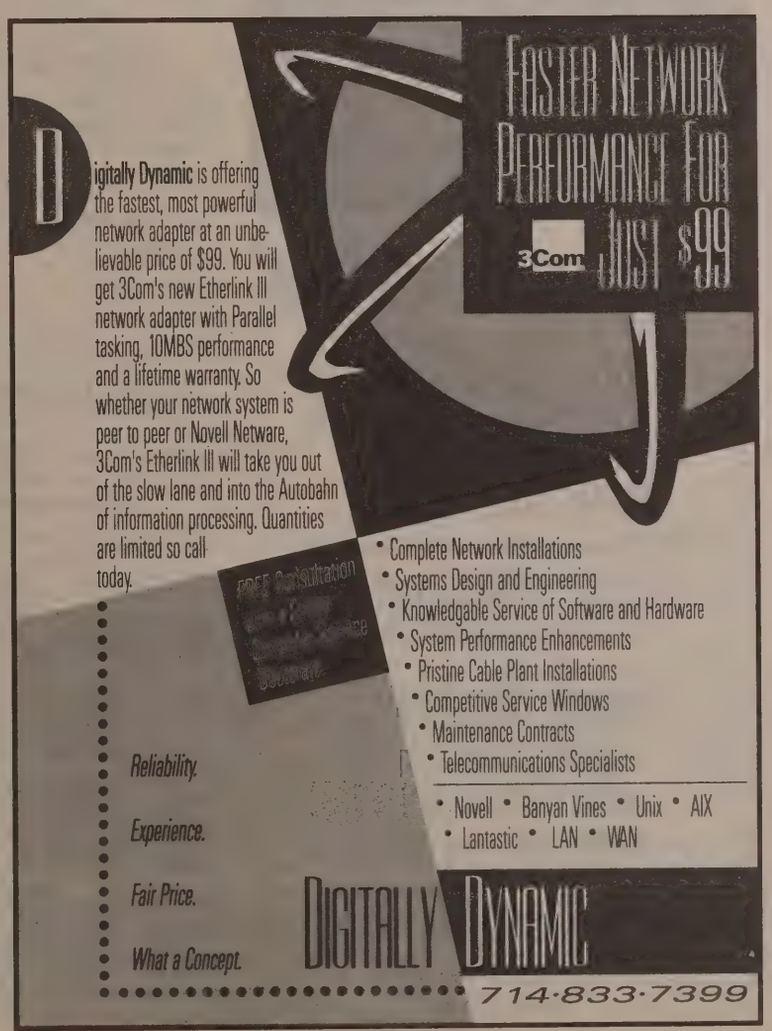
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BY ED KAHN

An Old Standard Returns

Borland Has Bought Your Way Software To Use In Sidekick For Windows

Back in the days

of using a CP/M-based personal computer I would find myself dreaming of getting an IBM-compatible system. One of the strongest reasons was to be able to use Borland's Sidekick. In those long-gone days, Borland's popular personal organizer product was found on nearly every MS/PC-DOS computer I encountered. While it may not have been as powerful as a program like VisiCalc, Sidekick commanded a loyal following.

More recently, when I first switched to Windows, one of the small but important programs that I missed was a good telephone manager. I eventually found a relatively obscure product that met most of my needs. YourWay not only dialed phone calls for me, but also included a calendar and scheduler that I seldom used. But even if I did anything more than use YourWay as a rolodex, it was definitely worth the few bucks it cost. As each new version was introduced, additional improvements were incorporated into the basic design. However, there always seemed to be several things I hoped would be fixed in the next release.

Then, one day, I received a product announcement offering to sell me a new version of Borland's Sidekick tailored to Windows. Interestingly, the flyer advertised that YourWay files could be easily transferred into Sidekick for Windows. I phoned the makers of YourWay and learned that, yes, they had sold their technology to Borland. I was delighted and phoned Borland for a copy of the new program. Borland has always been a fine company with excellent products. Surely they would be smart enough to make the improvements I thought YourWay needed.

I couldn't wait to install Sidekick for Windows onto my system. Installation was a breeze. Transferring my old rolodex from YourWay into Sidekick was simple. Only once I was up and running did I begin to notice the changes—some were the improvements I had been waiting for; others, however, were steps backwards. Basically, Borland had gutted YourWay of some of its most powerful features.

There are only two ways to talk with a technician: an 800 number that costs $14 per call or a 900 number that costs $2 per minute with the first minute free.

YourWay was particularly useful when I wrote a letter. Inside every program running under Windows, an icon would appear at the top of the screen that would allow you to instantly go into whichever module of YourWay you wanted to use. Clicking the icon again returned you to the program where you began. Sidekick has this feature, but various modifications not necessarily for the better were made to the edit menu of the address book. One example of these changes was the ability to transfer an address, with first name first and last name last, from YourWay's rolodex into a word processing document. This meant that the program could insert an address directly into a letter I was writing, saving time and removing the possibility of making a mistake when retyping the information. This feature, unfortunately, has been eliminated from Sidekick for Windows.

Another nice feature in the old program was that you could not only track phone calls, but instantly get access to a notepad linked to individual rolodex listings. This was a great place to keep all kinds of information. While it still exists in Sidekick, this feature has become more cumbersome to use.

To be fair, I must say that Sidekick for Windows is a good program, and if I had never seen YourWay I would probably be very satisfied with Sidekick. But there are too many compromises for me and I have gone back to using YourWay 4.0. It is hard to understand why a company like Borland would eliminate some of the most useful features from this powerful program.

Another shock came when I called Borland's technical support. I was told that there are only two ways to talk with a technician: an 800 number that costs $14 per call or a 900 number that $2 per minute with the first minute free. While it is true that you can currently buy the program for a bargain price of only $29 (regular list price: $99), you could easily spend that much again if you have any questions.

I attempt to review products that are worthy of your attention and not spend time talking about products to avoid. I devote so much time to the negative side of Sidekick only because Borland is a major vendor and I am surprised at what it did to a program that needed only a few refinements to be a truly spectacular product. Sometimes the need to put a personal stamp on a product is simply too strong. For my money, Borland would have done well just to adopt YourWay, put its name on the package, and fix a few bugs. With its name and distribution, I suspect Borland would have had a smash hit.

Borland is using Sidekick for Windows to introduce Borland Simplify, a new division which will market simple programs for individual users. I wholeheartedly applaud this move. Many of the programs currently available have grown in response to the needs of power users working on networks. Simple programs that help individuals in their daily tasks are becoming scarce.

Sidekick for Windows, with calendar, notepad, cardfile, and scheduling modules is a move in the right direction. I look forward to other Borland Simplify releases from its Consumer Products Division. The concept is good and will meet the needs of many individuals who are searching for the right tools, not bulldozers, to get their jobs done efficiently.■

RESOURCES:

Sidekick for Windows
Borland International Inc.
100 Borland Way
Scotts Valley, CA 95066-3249
1-800-431-1000

YourWay
Prisma Software Corp.
2301 Clay St., Suite 100
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ADAPTEC 2742T EISA SCSI-II CTRL (BARE)	350
ADAPTEC 2742TK EISA SCSI-II CTRL W/NOVELL S/W (BUS MASTER)	390
ADAPTEC 2742AT+K FOR COREL-DESIGNED SCSI	460
ADAPTEC 2842VLK VLB SCSI-II CTRL W/NOVELL, 052 S/W	285
ADAPTEC 2940K PCI SCSI-II BUS MASTER KIT	305
8744SS/KT44SS BUS LOGIC VLB SCSI CTRL (WITH KITS)	255/275
KT946C BUS LOGIC PCI SCSI-II KIT	305
KT910A BUS LOGIC PCI IDE CACHING CTRL	225

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CONNER 340MB IDE	269
CONNER 540MB/12MS/256K IDE	303
WD 212MB/13MS IDE	190
WD 340MB/13MS IDE	229
WD 420MB/13MS IDE	225
WD 540MB/11MS IDE	330
WD 730MB/10MS IDE	585
QUANTUM LPS540AT/540S 540MB/12MS/128K IDE/SCSI	305/345
QUANTUM EM1080S 1.08GB/9.5MS/512K SCSI-3	530
QUANTUM PD2100S 2.1GB/9.5MS/512K SCSI-3	1180
MICROPOLIS 2210A/4110 1.05/0.5MS /3.5" IDE/SCSI-II	649/679
MICROPOLIS 2217 1.75GB/10MS/3.5" IDE/SCSI-II	910
MICROPOLIS 1936 3.0GB/13MS/5.25" SCSI-II	1685
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KFC 9" MONO-VGA PAPER WHITE	135
12" BTC MONO AMBER	75
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14" HYUNDAI MONO-VGA PAPER WHITE	99
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CTX1451ES 14" SVGA 1024 X 768 .28DP NI, ENERGY SAVER	278
CTX1562GM 15" SVGA 1024 X 768 .28DP NI MPR3	355
CTX1565GM 15" SVGA DIGITAL	365
CTX1760LR 17" SVGA 1280 X 1024 .28DP NI LOW RADIATION	660
CTX1755GM 17" SVGA MPR3	575
NEC3V 15" FLAT (.28) 1024 X 768	479
NEC4FGE 15" FLAT .28DP 1024 X 768 NI	539
NEC5FGE 17" .28DP 1024 X 768 NI	1009
NEC5FGP 17"	1099
NEC4FGP 21" .28 1280 X 1024 NI 72Hz	1999
MAG MX15DX 15"	419
MAG MX15F 1280 X 1024 .28 NI DIGITAL LOW RAD.	458
MAG MX17DX 17" 1280 X 1024	699
MAG MX17F/FG 17" 1280 X 1024 .26 NI DIGITAL LOW RAD., ENERGY SAVER	819/849
VIEWSONIC 6E 14" .28DP 1024 X 768 NI	299
VIEWSONIC 15 15" .28DP 1280 X 1024 60Hz LOW RAD., FLAT	452
VIEWSONIC 15EX 15" .28DP 1280 X 1024	415
VIEWSONIC 17 17" .27DP 1600 X 1280 NI 76Hz LOW RAD., FLAT	925
VIEWSONIC 7E 17"	720
VIEWSONIC 17G 17"	785
VIEWSONIC 20 20" .28DP 1600 X 1280 NI 76Hz LOW RAD.	1495
VIEWSONIC 21 21" .25DP 1600 X 1280 NI 75Hz LOW RAD. FLAT	1725

MULTIMEDIA

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NEC 3X SPEED CDR500 INT. CD ROM (ORIGINAL PKG.)	498
NEC 3X SPEED CDR510 INT. CD ROM (OEM PKG.)	355
MITSUMI FX001D 2X CD ROM 250MS W/16 BIT CTRL	149
SONY 33A 2X CD ROM EXTERNAL W/5 SW & SPEAKERS	245
TOSHIBA 3401 2X SCSI-II CD ROM INT. 200MB/300KB	348
TOSHIBA 4101 2X SCSI-II CD ROM INT. 320MS/300KB	245
CREATIVE LAB SOUND BLASTER PRO VALUE EDITION (8 BIT)	89
CREATIVE LAB SOUND BLASTER 16 VALUE EDITION	111
CREATIVE LAB SOUND BLASTER 16 MCD	139
CREATIVE LAB SOUND BLASTER 16 SCSI-2	175
CREATIVE LAB SOUND BLASTER 16 ASP SCSI-II	205
CREATIVE LAB SOUND BLASTER 16 ASP M-CD	175
CREATIVE LAB SOUND BLASTER AWE32 (32 BIT)	289
CREATIVE LAB DISCOVERY CD 16 MULTIMEDIA UPGRADE KIT: -Sound Blaster 16, Panasonic 2X CD ROM, Speakers, 5 Titles	355
CREATIVE LAB GAME BLASTER CD 16 MULTIMEDIA UPGRADE KIT - Sound Blaster 16MCD, 2X CD ROM, Joystick, Speakers, 7 Titles	385
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ARCNET	
16 BIT ARCNET, COAX BUS	$39
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ARCNET 8 PORTS ACTIVE HUB, COAX	99
ARCNET 8 PORTS ACTIVE HUB, TWISTED PAIR	145
ARCNET 4 PORTS PASSIVE HUB	15
ETHERNET	
16 BIT ENET COAXZ OR 10-B-T, JUMPERLESS	$38
16 BIT ENET 2000PLUS (RJ-45/BNC/AUI) JUMPERLESS	43
32 BIT EISA ENET (AUI/BNC/TP) 3-IN-1	195
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D-LINK 16 BIT ENET COAX (#227)	89
D-LINK 16 BIT COMBO COAX,10 BT (#220CT)	99
D-LINK 32 BIT VLB ENET (#550)	289
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SMC 16 BIT ETHERNET CARD 10-B-T	129
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INTEL ETHEREXPRESS 16 BIT ENET	$145
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3COM 3C503 ETHERLINK II	$185
3COM 3C503 ETHERLINK II 16 TP	205
3COM 3C501 ETHERLINK	310
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ARTISOFT LANTASTIC/AI V 5.0 FOR DOS/WINDOWS	$89
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ARTISOFT LANTASTIC NODERUNNER ENET 8/16 BIT COAX (#843)	195
ARTISOFT LANTASTIC NODERUNNER 8/16 BIT 10B/T(#870)	195
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NOVELL NETWARE 386 V.3.12 5-USER 3.5"	$575
NOVELL NETWARE 386 V.3.12 10-USER 3.5"	1295
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NOVELL NETWARE 386 V.3.12 50-USER 3.5"	2495
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NOVELL NETWARE 386 V.4.01 10-USER (CD ROM)	1650
NOVELL NETWARE 386 V.4.01 25-USER (CD ROM)	2200
NOVELL NETWARE 386 V.4.01 50-USER (CD ROM)	3250
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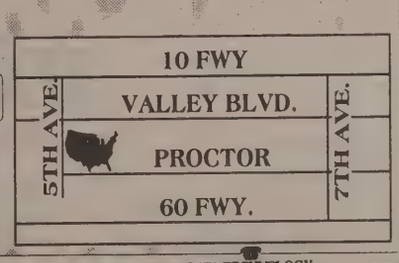

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Computer Of The Month

Legacy Notebook

Notebooks come in almost any configuration imaginable and can be tailored to meet the needs of almost any specialized customer. This month, I review a computer that incorporates more flexibility than I have previously encountered in a portable. But before discussing that, let me begin by describing the Mobile Office Systems Legacy notebook in its least expensive configuration.

For $1395 you get a monochrome local bus system with 4MB of RAM, expandable in increments up to 20MB (costs ranging from $195 to $749), 170MB IDE hard drive, and a 3.5" floppy drive. The notebook is powered by an 80486 CPU running at 25MHz. It weighs just under 6.5lbs., including the battery pack, with a footprint about the size of a piece of business stationary, and is less than 2" thick.

The Legacy notebook incorporates more flexibility than I have previously encountered in a portable.

The display measures 9.5" diagonally. A video port on the back of the unit allows you to attach a color monitor. The keyboard is well designed, but you also have the option of attaching an external keyboard or a numeric keypad ($60). If you are working in a different language, the built-in keyboard can be changed by the user.

I have featured many high-end portables, but felt it was important to focus on an entry-level notebook this month because many readers have asked about inexpensive portables that will still get the job done. This is definitely not one of the least expensive machines I have seen. Occasionally, there are ads for portables for under $1000, but they lack the features and flexibility of this one.

What I like most about the Legacy is its modularity. Again, in the past I have discussed modular machines, which I believe are the wave of the future, but I have seen none that are designed around such complete flexibility once you own the computer.

If you buy the Legacy in its least expensive configuration and later decide to upgrade, you can change *everything* yourself except the motherboard. Starting with the guts of the machine and working out, Legacy offers a choice of three CPU brands: Intel, Cyrix, or AMD. You can change this component yourself. If you need assistance, tech support will walk you through the process. You can buy these components anywhere—not just from Mobile Office Systems. Likewise, for the hard drive they offer a choice of five different brands, or you can go to any store to purchase a 2.5" hard drive. The hard drive is held in a slip-out holder by four tiny screws. There are no electronics or jumpers or anything else that will scare you from changing this component yourself.

If you decide to move from a monochrome to color display, you can choose a dual scan passive color or a top-of-the-line active matrix color display. Remove a few screws and replace the old with the new. This part will probably have to come from Legacy.

Impressive as this all is, there is still more to the modularity of the Legacy notebook. On the right side of the main unit is a removable function module that will accommodate almost any accessory you might need. The range of options is staggering: PCMCIA slots, fax/modems ($150), SCSI modules, LAN interfaces, scanner interfaces, extra serial port, even a multimedia kit ($485). Simply snap one module out and insert the next. This is great for those whose needs vary at different times. For instance, you might want to use the trackball when on-the-go, but switch back to a PCMCIA card when you get to your destination. The possibilities are endless, and changing modules is so simple that there is no reason to stick with a single configuration.

The list of options also seems endless. A docking station is available ($425). If the two hours of battery life are not enough, there is a double battery pack ($220). Both NiCd ($95) and NiMH ($140) rechargeable battery packs are available.

While this is not a well-known company, I believe the Legacy notebook is a safe buy because so many of its parts are generic. You can buy new components at any computer supplier and fit them into the box. Although some parts like switches and latches are not generic, Mobile Office Systems provides a one-year warranty. If you are worried, for $169.95 you can buy a policy from GE that gives an additional three years. This coverage includes telephone consultation, and if the problem is not resolved, they will come to your office or home. With this additional warranty, you are assured of four years of dependable service.■

RESOURCES:

Legacy Notebook,
$1395
Mobile Office Systems
1574-3 N. Batavia St.
Orange, CA 92667
(714)974-5134

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3C509 Etherlink III ISA 16-bit Combo	149.00
3C529 Etherlink III MCA 32-bit	249.00
3C579 Etherlink III EISA 32-bit	249.00

Token Ring

3C619 Tokenlink III 16/4 ISA 16-bit	439.00
3C629 Tokenlink III 16 MCA	479.00
3C679 Tokenlink III 16/4 EISA 32-bit	589.00

ADDTRON

Arcnet

ARC-120 ISA 8-bit Combo	55.00
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Ethernet 10 Base-T

AE-200LT ISA 16-bit (Novell Certified)	39.00

Ethernet Coax

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Ethernet Combo

AE-200LC ISA 16-bit 2-in-1 (Nov Cert.)	49.00
AE-200JL ISA 16-bit 2-in-1 Jumperless	55.00

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Ethernet 10 Base-T/Coax

D-Link BNC Adapter	79.00
D-Link BNC & 10 Base T Combo Adapter	90.00
D-Link PCI BNC & 10 Base T Combo Adapter	239.00
D-Link MCA Combo Adapter	189.00
D-Link EISA Combo Adapter	295.00

ARTISOFT

Ethernet 10 Base-T/Coax

Node Runner 2000 ISA 16-bit	179.00
Node Runner 2000 MCA	269.00
Node Runner 2000/A ISA 16-bit Combo	239.00
Node Runner/SI 2000 ISA 16-bit	106.00
Node Runner/SI 2000/A ISA 16-bit Combo	135.00
Node Runner/SI 2000/A MCA Combo	169.00

INTEL

Ethernet 10 Base-T/Coax

EtherExpress 16 ISA 16-bit	109.00
EtherExpress 16 ISA 16-bit Combo	129.00
EtherExpress 16 ISA Flash	125.00
EtherExpress 16 ISA Flash Combo	145.00
EtherExpress 16 MCA 32-bit	189.00
EtherExpress 32 EISA Flash	249.00

NOVELL/EAGLE/MICRODYNE

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NE2000 Plus - 3 ISA 16-bit Combo	109.00
NE/2C MCA	265.00
NE3200 EISA 32-bit	499.00
NE3210 EISA 32-bit	189.00

Token Ring

NTR2000 TR ISA 16-bit	319.00

SMC

Ethernet 10 Base-T/Coax

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NOVELL

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NetWare for SAA 62 session	4,419.00
NetWare HostPrint 16 sessions	879.00
NetWare HostPrint 128 sessions	2,195.00
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Novell NetWare Connect 32 port	4,395.00
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NetWare for Macintosh v3.12 200 User	729.00
NetWare for Macintosh v4.0 Unlimited	879.00

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NetWare Management System v2.0	1,839.00

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PC/4E w/ Conn	459.00
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PC/16EM System	995.00
EISA C/16 w/ Conn	1,449.00
ISA EPC/16 16 Port Multiport w/ Conn	1,895.00

NOTEBOOK ETHERNETS

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Addtron Pocket Ethernet	159.00
Xircom Pocket Ethernet III	289.00
Xircom Pocket Ethernet III Combo	319.00

PCMCIA

3Com Etherlink III 10 Base-T	259.00
3Com Etherlink III Combo	309.00
Xircom CreditCard	239.00
Xircom CreditCard Combo	269.00

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Artisave Tape Backup Software	249.00
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Corstream Server 10 Users w/10 Pk Lan 6.0	1,789.00
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Corstream Server 10 Users w/o 10 Pk Lan 6.0	1,469.00
Corstream Server 25 Users w/o 25 Pk Lan 6.0	2,389.00
Corstream Server 50 Users w/o 50 Pk Lan 6.0	3,109.00
Lantastic for Machintosh Software Only	449.00
Lantastic for Machintosh Complete Kit	599.00
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Lantastic	1,349.00
Lantastic 6.0 50 Users	2,195.00
Simply Lantastic 2 Station Starter Kit	239.00
Simply Lantastic 1 User Add-On	119.00
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Simply Lantastic Special Cable 10 feet	12.00
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TCP/IP Connectivity 1 User	219.00
TCP/IP Connectivity 5 Users	889.00
TCP/IP Connectivity 10 Users	1,549.00

MICROSOFT

Windows for Workgroup DOS Add-On	48.00
Windows for Workgroup 3.11 WINDOW Add-On	49.00
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Windows NT 3.1	327.00
Windows NT 3.1 Advanced Server	959.00

NOVELL

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NetWare Lite 1.1 w/DR-DOS	65.00
Novell DOS 7.0	79.00
NetWare 3.12 5 Users	599.00
NetWare 3.12 10 Users	1,299.00
NetWare 3.12 25 Users	1,899.00
NetWare 3.12 50 Users	2,499.00
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D - LINK

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SMC

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APC

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Power Chute Plus Software	69.00

TRIPP-LITE

BC-600 UPS System Lan	289.00
BC-900 UPS System Lan	389.00
Omni 600 UPS System Lan	359.00
Power Alert Software	65.00

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Barrel Connector	2.00
50 Ω BNC Terminator	2.00
93 Ω BNC Terminator	2.00
T-Connector	1.75
RJ-45 Connector	.89

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WINDOWS 5 Users	269.00
WINDOWS 250 Users	1,589.00

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Powertape 4GB External	1,599.00
Powertape NLM 5 Users	319.00
Powertape NLM 20 Users	669.00
Power DAT 8000 4GB Internal	1,295.00
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CONNER

Python 2GB Internal DAT Drive Only	899.00
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Arcada Back Up Software For Window NT Server	559.00

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Adaptec AHA-1542CF Adapter w/Kit	259.00
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Adaptec AHA-2842C VL-Bus Adapter w/Kit	249.00
Adaptec AHA-2742T EISA Adapter w/Kit	379.00
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Lan Rover 4/T-Token Ring	3,369.00
NetModem/E Commserv, BNC	1,529.00

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CONNER

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2.14GB [ST12550N] SCSI-II 9ms	1,829.00

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Compatible Systems	
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BRouter 90Ti Router	2,499.00
D-Link	
Ethernet High Speed Bridge	2,639.00
Hewlett-Packard	
Ethernet Router s/SNMP	5,539.00

NETWARE RADIOM SYSTEM

MICROPOLIS

Microdisk AV 1050 1.05GB External	1,349.00
Microdisk AV 1760 1.76GB Ext w/Software	1,629.00
Microdisk AV 3020 3.02GB External	2,899.00
Microdisk LS 2100 2.1GB Ext w/ Software	2,159.00
Microdisk LS 3020 3.02GB External	2,799.00
Microdisk LT 1050 1.05GB External	1,269.00
Microdisk LT 1760 1.69GB External	1,549.00
Raidion 4200 3-2.1GB External SCSI-II	6,799.00
Raidion 6040 3-3.02GB External SCSI-II	11,659.00

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2 Port Coax/Thick Repeater	359.00
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Thick to Thin Transceiver	55.00

ALLIED TELESIS

RJ-45 to AUI Repeater	252.00
RJ-45 to BNC Repeater	289.00

C-NET

C-Net Repeater-2 BNC, 1 AUI	449.00
C-Net Repeater-2 BNC, AUI, & Fiber Optic	719.00

D - LINK

10 Port Repeater	517.00
10 Port Repeater w/ SNMP	775.00

IMC NETWORKS

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News From The Telecommuting Front

Telecommuter Leadership

At the recent Telecommuting Advisory Council conference in Tempe, Arizona, there was an interesting presentation by Jaclyn Kostner, a "virtual teams" consultant and author of the intriguing book *Knights of the Tele-Round Table: Third Millennium Leadership.*

Dr. Kostner's point of view is that "teams without walls"—that is, work groups, departments, and project teams that include one or more telecommuters, or that operate from two or more locations—require new paradigms of leadership and control. Until recently, most work groups operated in one location, for one boss, and within one organizational unit. Today, work groups are frequently drawn, ad hoc, from a variety of sites, hierarchies, and organizations. They may include representatives from suppliers, customers, vendors, and government. As a result, old-style leadership methods are not up to the task of managing them effectively.

Old-style leaders could simply call a meeting around a table and know that everyone would be there. They could monitor work by seeing it done. They learned to do all their coaching, giving feedback, handling conflict, spotting and solving problems, empowering, motivating, and other leadership work at one site.

But leaders of today's new "teams without walls" tend to be sitting at their desk all alone. They can't see their people. They can't see the work being done. They can become very uncomfortable if they aren't trained or encouraged to develop a new and more appropriate leadership style.

The biggest difference is that leaders must work much harder to create a higher level of trust: trust between them and their telecommuters, and trust between individual telecommuters and other team-members.

Although we all have some level of trust in the others on our team, in terms of effectiveness, trust is far less important and there can be less of it when everyone works at one site. If a leader calls a telecommuter and hears a television, or children crying in the background, it takes a great deal of trust to feel sure the work is still being accomplished.

Dr. Kostner says that the most effective telecommuting groups have leaders who consciously develop higher levels of trust within the team. Because meeting electronically is not effective enough at building the necessary level of trust, they regularly create situations to bring people together physically.

"If the distance is convenient," she says, "it's best to do the traveling and have everyone meet once a week. If this would require a couple of hours of travel, or a long commute (say from one end of Los Angeles to the other), then it's enough to meet once a month, and to meet via the 'tele-round table' at least once a week."

For Dr. Kostner, the "tele-round table" is a term that refers to modern electronic capabilities—speakerphones, or other technology for audio and video conferencing—that can bring people together in real time for the free exchange of ideas and information.

With modern telecommunications capabilities that make it convenient and easy to exchange virtually any kind of ideas, information, even documents at the speed of light, you might wonder what purpose would be served by a physical meeting. According to Dr. Kostner, and many others, there's not yet any practical substitute for this means of developing a sufficiently high level of trust within the team.

She counsels that, at these meetings, there should be plenty of informal time for people to talk, have lunch, and do the usual things that help to build social relationships. "It's not good to have every minute organized into formal, agenda-driven activities," she says. "Don't underestimate the importance of informal gatherings."

The lack of such physical meetings, says Dr. Kostner, is the main reason that telecommuters suffer from isolation. Not being able to see people regularly, not being able to reach people at a moment's notice when they need to, getting voice mail instead of a real person (which happens seven out of ten times, according to her research) just does not give telecommuters enough person-to-person contact to be fully satisfying. "People want a certain amount of real-time connections to real people," she points out. Without it, they pine for the social dynamic of working together.

The meetings that everyone attends should also be set up to include a lot of work-related interaction. The leader should avoid doing all the talking, or scheduling one-way presentations for the bulk of the time. Such informational requirements are easily handled by voice mail and email, by sending documents or faxes to everyone on the routing list. Face-to-face meeting time should be used to discuss issues, create ideas, make decisions, and find solutions—as a team.

In addition to the regularly scheduled face-to-face meetings, Dr. Kostner offers the following three techniques for building trust within a modern-day "team without walls":

1) Develop a communications plan to make sure everyone on the team stays in the loop. Deal with such issues as: How are we going to handle our voice mail? Should we update our messages every day? How do we indicate that we're leaving a high-priority message for a fellow team-member? How can we get a response that we need urgently?

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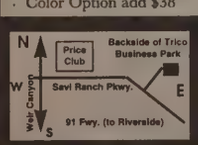

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Telecommuting...*continued*

create an energizing environment at their remote work site. Eventually, every telecommuter may begin to feel the walls caving in on them. There are no hard and fast rules for how to avoid this, but it's important to find a method. In one organization, for example, the telecommuters get together once a week to keep each other motivated and energized. In another organization, remote workers have designated "gatekeepers" at the home office who make a special effort to pass along tidbits of information that might otherwise not get through.

3) Finally, develop and use what Dr. Kostner calls "a decision tool" that taps into people's actions (as contrasted with a "vision" that taps into people's hearts). The decision tool serves to help direct the daily actions of the people working remotely. She says that King Arthur had his knights loyal to the idea of: "Might For Right." More recently, she points out, Ford used a decision tool—"Quality Is Job One"—that was used by managers and front-line employees to drive decisions throughout the Ford organization for many years.

Although teams can develop more elaborate and detailed "decision tools" (one group has formulated seven points for team-members to think about), Dr. Kostner recommends that it's better to have just one concept. It must be created from within the organization, and be a slogan, a motto, a theme, or a concept that can focus and help determine the actions of the people who are operating remotely.

The most effective telecommuting groups have leaders who consciously develop higher levels of trust within the team.

According to Dr. Kostner, telecommuting is truly the new way of work, but it is too great a leap for many leaders to make unless they receive special training. It is certainly possible for leaders of "teams without walls" to be highly effective, but they must do things differently and become more centered on their people. Think of Jean Luc Picard, captain of the starship Enterprise on *Star Trek—The Next Generation.* Surrounded by the highest technology, he is almost totally focused on listening to his people and dealing with their ideas, their needs, and their problems. For Dr. Kostner, Captain Picard is a third-millennium leader in every sense of the word.

For more details on any of this, contact: Jaclyn Kostner, Ph.D., president, Bridge the Distance International, 8378 E. Jamison Circle S., Englewood, CO, 80112-2756, (303)694-9099. Fax: (303)694-9091. She is the author of a best-selling book, *Knights of the Tele-Round Table: Third Millennium Leadership,* which is available in most bookstores.

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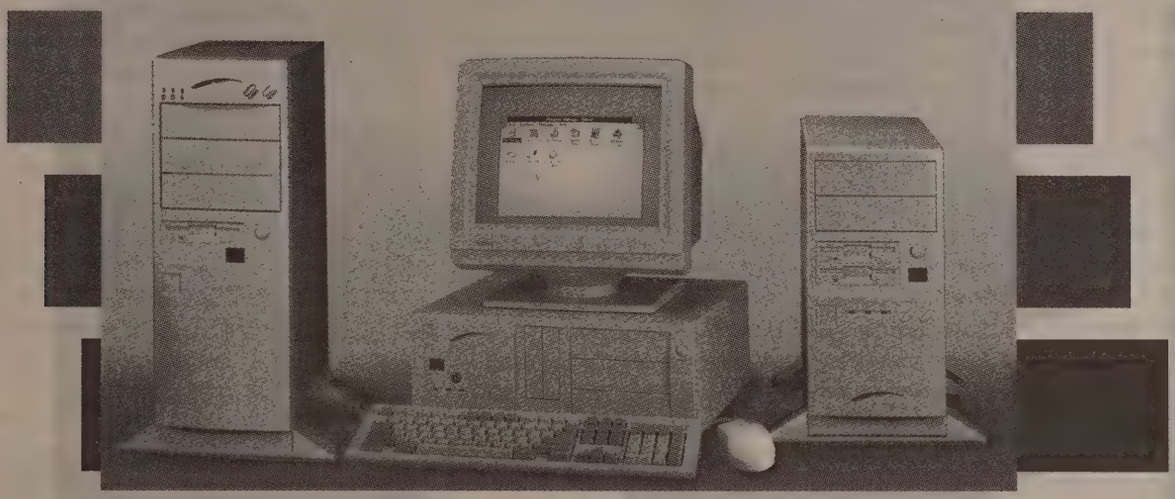

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Telecommuting...*continued*

The main advantage of call following is that people need to know only a single telephone number to find you, wherever you are. The switching equipment takes care of routing the call according to parameters you set up. For example, calls to your number will be forwarded automatically to your cellular telephone, provided it is turned on. When you turn it off, calls to the same number will now be forwarded to another location, perhaps your home, or your office.

Call following can make it possible to funnel all your calls to a single answering machine or voice mail system, or even to a pager. Depending on how it is implemented, you may also be able to create and program special dialing codes, which you give out selectively to special people. By dialing the proper code at the time they call you, your callers may be able to have the calls billed to you instead of paying for it themselves, or to have calls put through to your cellular or home phone, while those who don't dial the right code get only your voice mail system.

Parts of this service are presently available (for numbers with an area code of 700), and people have been very receptive to this new level of convenience and simplicity, despite the added cost. Now AT&T, MCI, Sprint, and other providers will be creating a totally cooperative telecommunications system that can let calls to a single number follow you anywhere around the nation (and within a few years, anywhere around the world). These new "500" numbers are expected to cost about $10 to $15 per month.

For telecommuters, this is a chance to make the precise location from which you are working totally invisible to the outside world. No one who calls you ever needs to know (or care about) your schedule, or where you can be found on certain days.

On a personal level, the new "500" service brings up the possibility of having a single telephone number from birth to death. We'll give each child a number, and will always be able to call them. With this system in place, you need never lose touch with your high school friends, even if they move to the Amazon!

Watch your local newspapers and TV for more information on this "500" service, and as always I'll keep you posted on new developments.

Telecommuting Financials

People have long been advocating telecommuting as a way to improve productivity and morale, to attract and keep desirable employees, and to make a business more flexible and responsive. But a few financially oriented souls have also been advocating telecommuting as a way to improve a company's bottom line.

According to one analyst, when a corporation buys a building or signs a lease, that's a financial commitment to be carried on the books as a liability. Since telecommuting reduces the amount of office space a corporation requires to support a given number of employees, it can be factored into the real estate equation to reduce that liability. The dollars saved fall directly to the company's bottom line.

Here's one analysis of how this can work:

Assume that a typical employee requires 250 sq. ft. of office space, which includes a

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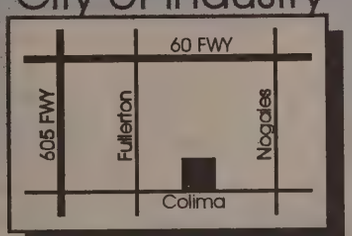

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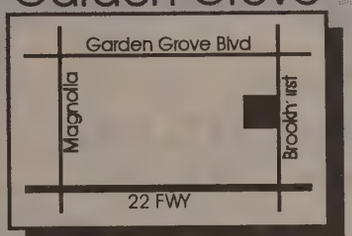

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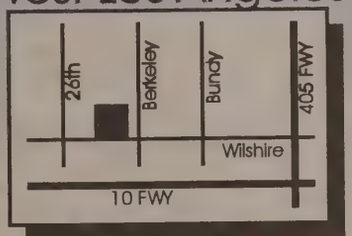

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Telecommuting...*continued*

proportional share of common areas, bathrooms, and so forth. If rentals are $2 per square foot per month, and overhead (including furniture, cleaning, utilities, security, and the like) is only 50% of the rental cost, then each square foot of office space costs the company $36 per year. This means an employee who is on-site full time costs the company about $9000 per year.

Every day per week that the employee works off-site via telecommuting creates an instant annual real estate savings for the employer of about $1800. In a corporation with dozens, or hundreds, or thousands of employees, the benefits can add up very fast.

Telework '94 (#1)

Telework '94 is the name of the first Canadian symposium on telecommuting, scheduled for Toronto in November. It's sponsored by a group of Canadian public and private organizations; and should attract more than four hundred experts and interested parties from several nations.

Topics to be addressed at Telework '94 in Toronto include: human resources and other operational issues surrounding telecommuting, the potential impact of large-scale telecommuting on urban environments; and the organizational risks, costs, and benefits of telecommuting.

For more information, contact: Henriette Gravelle, Coordinating Committee, Telework '94, 300 Laurier Ave. W., L'Esplanade Laurier (3rd Floor, West Tower), Ottawa, K1A 0R5, CANADA. Or call her at: (613)941-0288. Fax: (613)952-8100.

Telework '94 (#2)

Telework '94—New Ways to Work is also the name of a European conference on teleworking scheduled for November 3rd and 4th, 1994, and sponsored by the City of Berlin, Germany, in association with the European Community Telework Forum, the European Community COPERNICUS actions for Central and Eastern Europe, and COST Telecommunications.

It will bring together Eastern and Western European politicians, policy makers, industrialists, union representatives, telework pioneers, and researchers.

Topics include: the economic and social potential, as well as the organizational implications, of telework and flexible working; the challenge of new ways to work for Europe; the technological basis for telework and other new ways to work; the constraints on trans-border telework; and development of an agenda and action plan to promote telework and other flexible work arrangements.

The conference will be held in conjunction with an exhibition of technical and organizational methods relating to telework; a meeting of the European Inter-Parliamentary Interest Group on telework; and a meeting of the Steering Group for COPERNICUS telework projects.

For more information, contact: FOKUS bvba, Lange Leestraat 268, B 2018 Antwerpen, BELGIUM. Phone: 32-3-2-30-20-56; fax: 32-3-2-18-46-76; Email: 100013,3347@Compuserve.com .■

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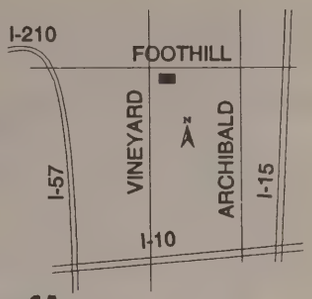

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- Local Bus IDE Controller
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- PCI Bus IDE Controller
- 2 Serial/Parallel/Game Port
- TEAC/NEC 1.2 & 1.44MB Floppy Drives
- 15" NI SuperVGA Monitor with Tilt & Swivel Base (1280 x 1024, .28mm dp)
- Mid Tower Case w/250W UL, CSA Pwr. Supply
- Green PC ZIF Socket
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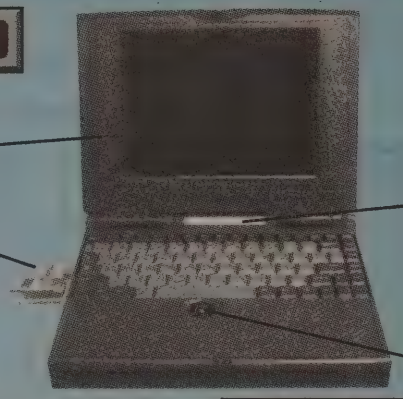

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486DX4-100 4MB/450MB	N/A	$2859	$3839

*Mono Model Does Not Have Sound Chip Built-IN

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NOVACO

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- Dimension: 11" x 8.5" x 1.7

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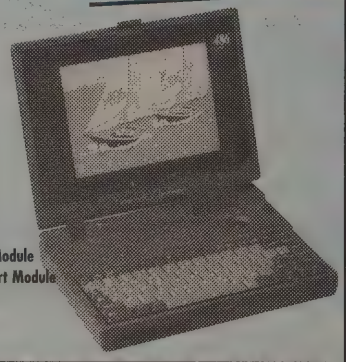

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486SX-33 4/200	$1940	$2471
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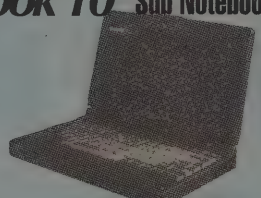

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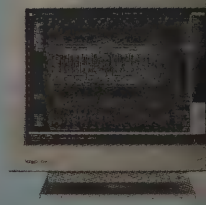

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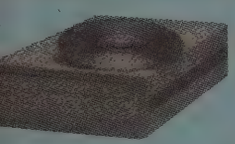

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INTERNET • BY JOHN S. QUARTERMAN, GRETCHEN K. PHILLIPS, AND SMOOT CARL-MITCHELL

Seven Conferences In Two Months

An Internet Travelogue

Online communications lead to in-person communications, often at conferences. Some of the most important communications at conferences are not the presentations, but rather the hall talk.

With so many conferences related to networking these days, it's useful to characterize some of them a bit to make it easier to decide which to attend. At all of them, presentations tend to be divided between advocates and more cautious powers-of-other-kinds-that-be. Not only do you see the same presentations at different events; many of them are by the same presenters.

Finally, getting Internet access at a conference used to be difficult, but is now expected. Access during a presentation to show live demos used to be unheard of, but is becoming common. Let's illustrate these points by some anecdotes from our summer of conferences.

The sight of hackers in jeans and marketing people in suits, all earnestly discussing the pros and cons of ATM, IPNG, OSPF, while walking obliviously through a sea of one-armed video bandits and past the petrified Elvis in the Hilton lobby, was worth the trip in itself.

Las Vegas (May 2–6)

InterOp+NetWorld was small by Las Vegas standards; only ninety thousand people wandered through the trade show. But there are probably only three places in North America for a conference of that size: Las Vegas, Atlanta (site of InterOp+NetWorld September 1994), and Chicago.

The sight of hackers in jeans and marketing people in suits, all earnestly discussing the pros and cons of ATM, IPNG, OSPF, while walking obliviously through a sea of one-armed video bandits and past the petrified Elvis in the Hilton lobby, was worth the trip in itself. It would be interesting to know how many people gambled and what the win ratio was, compared to, oh, the Tailhook convention held in the same hotel in a previous year. Are hackers as austere as they sometimes seem? Or did everybody try every game, just to see how to hack it? And did they succeed?

The trade show itself had booths by just about every company that sells hardware or software related to networking, whether IP, NetWare, or sneakernet. Paid actors disguising canned talks as entertainment were more numerous this year. Cute freebies required sitting through one or more such talks more than in previous years.

Were there any big technical or business announcements at the show? Probably, but the main idea was as usual to indulge in maximum schmoozing. If you want to see working examples of current products in networking, InterOp is the place for you. Most of you won't even have to leave your continent: there was one in Germany in June, and one in Tokyo in July.

There were two kinds of tutorials this year: the traditional two-day ones, and one-day workshops. Smoot and John gave one of the latter on connecting to the Internet, using our recent book, *The Internet Connection*, as a textbook.

Our main impression of InterOp audiences is that the IP vs. NetWare mix of backgrounds created when InterOp (or Ziff-Davis) bought NetWorld is still unsettled, so you have to be very careful to tune your workshop description to emphasize prerequisites, such as knowing what Class A, B, and C IP addresses are. Otherwise, it's easy to have half the class bored and the other half over their heads. Also, InterOp audiences want their tutorials to march right along and to match the tutorial notes very closely. They like to ask questions, but they don't like digressions.

The conference part of InterOp was about the same as usual. This isn't a peer-reviewed academic conference; it's an extension of the Internet good-old-boy network. Some of the old boys and girls get appointed to run sessions, and they pick speakers from people they know, personally or by technical reputation. This usually works quite well in presenting technical and contextual information to an exponentially expanding audience of newcomers to networking, or to the exploding plethora of related subtopics.

There were also the usual product presentations, Birds of a Feather (BoF) meetings, hospitality suites, shownet, scattered terminal clusters (but no printing), InterOp TV, and other goings-on.

One of the biggest benefits of InterOp isn't the scheduled events. It's being able to find so many network participants all in the same place, schmoozing. One of the biggest disadvantages of InterOp is it's so big that unless you're already scheduled to meet someone, it's hard to find them. Such are the dangers of success...

Las Vegas has the World's Biggest of lots of things, and a full-size pyramid with a full-size sphinx. Its previous reputations of tacky and shady seem to be giving way to something that Disney and San Francisco should perhaps be worried about.

Austin (May 9–10)

Making Money on the Internet. Smoot thought of the title, Professor Andrew Whinston was the organizational focus, and 125 people came to this conference, which was supposed to be limited to one hundred people.

It was cosponsored by the Center for Information Systems Management, School of Business Administration of the University of Texas at Austin, Texas Internet Consulting (TIC), Bunyip, RGK Foundation, and the University of Texas at Austin's IC2 Foundation.

Think of it as TIC's old boy network conference. We had Brewster Kahle for WAIS, Peter Deutsch for Bunyip and archie, Tom Stone for Addison-Wesley, and James Michener for literature.

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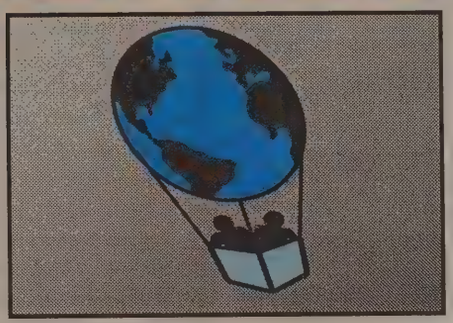

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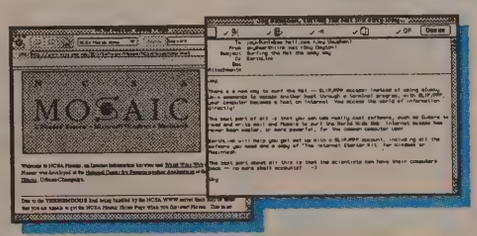

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Internet *continued*

No terminal room, but one machine on the Internet for attendees to use.

Boston (June 6–10)

The USENIX Association celebrated twenty-five years of UNIX computing with a refereed program, invited talks, and special anniversary sessions. Peter Salus chaired a session on the history of the ARPANET, which began operations twenty-five years ago this year. He's writing a book about the history of the ARPANET and the Internet, continuing the historical theme from his recent *25 Years of UNIX*.

In this session he had Dave Clark (the Internet Architect), Mike Muuss (self-proclaimed early Internet UNIX bigot), and Alex McKenzie (from BBN, which was the prime contractor of the early ARPANET). The discussion was wide-ranging. John contributed a current map of the Internet, which Peter contrasted to The Earliest Network Map, which he had recently discovered in RFC 4. The session ended with speculation on who invented distributed electronic mail and when. John had the earliest date, relating correspondence with Ray Tomlinson of BBN, who said he did it but couldn't remember whether it was in 1972 or 1973.

Gretchen coordinated the terminal room repeating several past services, including Kerberos authentication, distribution of Free Software Foundation (FSF) software, and Xterminal access to the Internet. There was also a terminal server connected to half a dozen hotel house phones, for those of us with laptops in our rooms.

Prague (June 15–17)

INET'94 claimed twelve hundred participants, and it looked like that many people were there. Unfortunately, the organizers were not prepared for so many; for example, they ran out of tickets for the reception after one thousand. Nonetheless, it went quite well, we thought. It seemed that every country in the Matrix had a representative there, from Ghana to Singapore. Singapore will be the site of INET'95, and had a booth in the vendor exhibit.

The politics of networking were pretty evident here. The conference itself was a coproject of the Internet Society (ISOC) and RARE (Associated European Research Networks). RARE is funded by the European Commission and sponsors Dante, which is roundly disliked by proponents of Ebone, which was the first pan-European backbone IP network.

A bit of European vs. North American IETF (Internet Engineering Task Force) politics was also aired. The first speaker was George Soros, famous for augmenting his billions by betting against the pound a couple years ago, and for funding network infrastructure projects in the east of Europe. The final speaker was from the White House, with a David Letterman-style top ten list.

It was much easier to find people at INET than at InterOp, although INET is also getting so large that timesharing is becoming a major problem. Nonetheless, lots of people who were in Las Vegas were actually accessible in Prague.

The vendor exhibit was very small, with perhaps a couple dozen booths, at least three of them publishers (O'Reilly, Paramount, Addison-Wesley).

The terminal room was extensive, with Suns, Macs, and DOS PCs. Printing, however, required asking one of the administrators, who would FTP it to a particular machine and manually queue it.

John and Gretchen gave a paper (Smoot was a coauthor, but he had to give a tutorial at Sun User Group in California, and hasn't yet figured out how to teleport or colocate). We had wanted to call it "The Latency of Europe," but somebody thought that might imply a continent of sluggards, so it was retitled to "The Internet Pinged and Mapped." The subject was round trip times as measured by ICMP ECHO using ping. There were two other ping papers, one before, and one after. About eighty people came to see all three, and asked very good questions.

It was much easier to find people at this conference than at InterOp, although INET is also getting so large that timesharing is becoming a major problem. Nonetheless, lots of people who were in Las Vegas were actually accessible in Prague.

Copenhagen (June 20)

Keld Bjorn Simonsen is hard to find in telephone directory assistance unless

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Internet *continued*

you emphasize his middle name, but participants in networking, UNIX, standards, or internationalization are likely to know his name. He's one of the founders of both DKUUG (the Danish UNIX system User's Group) and DKEUnet (the Danish part of EUnet), and he invited us to stop in and talk for an afternoon, so John and Gretchen did.

About thirty people came. We figured them as both UNIX and network literate, and they were. We gave them a core dump of four hours of every slide we brought to Europe, from global growth rates to per country and per capita host counts, from host maps to server maps, from the Matrix at large to the inside of the Internet by latencies. They ate it all up and asked by far the best questions of the summer.

No terminal room, but EKEUnet let us read and send our mail.

San Francisco (June 19)

Smoot previewed our Practical Internetworking tutorial at Sun User Group. Lovely city; lots of panhandlers.

Oslo (June 21–22)

An astute group of about fifty people, who knew what they wanted. NUUG (the Norwegian UNIX system User's Group), led by Jon Petter Bjerke and Andreas Hope, had done a good translation of our Practical Internetworking workshop description, and there wasn't so much confusion about platforms (UNIX vs. DOS) or network protocols (IP vs. NetWare) as at InterOp. Not many questions, perhaps due to a need to concentrate on the foreign language of English, and conceivably also due to Norwegian taciturnity. But we applied the InterOp lesson of sticking to the plan at all costs, and the attendees professed themselves pleased with the result.

No terminal room, but NUUG had a Sun and a PC on a dialup PPP link to the Internet, and some demonstrations and mail exchange were had.

London (June 23–24)

The Information Highway conference, organized by Peter Judge and Sue Day of Technology Appraisals, Ltd., was an interesting event, with about seventy people; smaller than the similar conference TIC sponsored in Austin. Several of the usual crew were presenting. Ole Jacobsen of InterOp was John's session chair. John's talk had the title "A Tour of the Matrix" and he shamelessly used the word "tour" as an excuse to present almost every transparency he brought to Europe, but in twenty-five minutes, not four hours. Judging by the ensuing questions, it worked.

Glenn Kowack, CEO of EUnet, was another obvious member of the usual crew, and his presentation, along with that of Fearghas McKay (which we unfortunately missed, due to schmoozing in the hall with Glenn) and Mark Gibbs, elicited an observation that the attendees were divided into three groups, as follows.

1) The net participants, such as those so far mentioned, who presented ad lib and with almost reckless enthusiasm for their subject, which was unabashedly the Matrix and the Internet.

2) The representatives of large institutions, such as government agencies or telephone companies, who expressed careful approval mixed with prudent caution, producing predictions of real use of networking services, not necessarily over IP, in two to five years.

3) The paying audience (and they paid more than £900 or about $1300, for two days) of MIS (management information services) directors and CEOs (chief executive officers) of companies from small to very large.

We have to wonder which version of reality the paying attendees believed. The two versions don't actually conflict as much as it might seem. This is especially fortunate, since the same three categories of people were also discernible at most of these conferences. ■

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ACCOUNTING • BY DAVID SIMON, CPA, AND JENNIFER R. CHERNISS

Accounting Software For Consultants

Windows-Based Personal Accounting Packages That Offer Useful Tools To Help Manage Your Books

Consultants, contract workers, and those in business for themselves may not consider bookkeeping their favorite pastime. Keeping accounting records, however, is like visiting the dentist: you can loose your teeth if you don't.

This article examines three Windows-based "personal" accounting packages that can make life easier for micro-small businesses at minimal cost. They are: Meca Software Managing Your Money, Computer Associates Kiplinger's CA-Simply Money, and Intuit Quicken; as well as a fourth package, Microrim In the Black, which has a little more horsepower.

Personal accounting software focuses on tracking expenditures and maintaining checkbooks. Different packages variously offer additional features such as investment tracking, budgeting, invoicing, contact management, monthly account reconciliations, and online services for trading securities or banking.

While the basic set of features may be inexpensive, this is not necessarily true for the accessories. Services such as online banking and stock trading do cost extra for those who use them. Thus, a user may fill their accounting needs better by foregoing extra features that will rarely be used and concentrate on the specific features they do want.

Personal accounting software is too limited for many small businesses. But for a sole proprietor or consultant whose primary need is to organize financial records without making a second career of it, they're the proper tool for the job.

Because of employment tax laws, many contract workers are feeling pressured to incorporate in order to open some job opportunities. Passengers in that boat need to keep a balanced set of books, showing assets and liabilities, from which to prepare corporate income tax returns. Partnerships also require scrupulous bookkeeping. As a practical matter, a computerized accounting system is the best answer.

Packages road tested here are designed so that non-bookkeepers can create and record transactions relatively easily—one vendor boasts that users "can't mix up debits and credits or journals and ledgers." Routine transactions are made in friendly ways, such as by filling in a graphical display of a check, or clicking-on cleared checks when performing bank reconciliations.

Despite their simplicity, you still ought to touch base with your accountant at critical times. For example, problems can result from the way the software is initially set up if the chart of accounts isn't adequately tailored to your needs. Another critical time, if you're incorporated, is when you record various year-end tax adjustments typically provided by your tax preparer.

When selecting personal accounting software, it's easy—but unnecessary—to get neurotic about the inherent tradeoffs between programs. Accept the fact that these packages are limited. Even if your basic needs are met, you may never be completely happy with any of them. And don't count on helpful recommendations from a financial, accounting, or management consultant; they don't make their living by recommending $50 software. One CPA I know, asked by a client to meet for a consultation on personal accounting software, advised "Let's not. Just pick one and get it." Fortunately, even if you select the "wrong" software, you'll probably still be able to generate the reports needed on April 15th.

On the other hand, the right package will offer important conveniences and useful tools to help manage your books and your practice; enough so to justify doing some homework and shopping for features.

Quicken

With Quicken, Intuit has shaped the market perception of personal accounting by much the same means that McDonald's redefined the French fry, through stepwise modifications based on extensive market research of user needs. Intuit zealously keeps their product current from ground-up, rather than coating and pampering soggy source code, as many market leaders tend to do after a while.

THE KEY ASPECT OF PERSONAL ACCOUNTING SOFTWARE IS ITS SIMPLICITY. SO RESIST THE TEMPTATION TO BUY MORE THAN YOU NEED.

The program covers all the bases of personal accounting software: it manages bank and credit card accounts, tracks investments and other assets, reports on jobs or projects, creates budgets, writes checks, pays bills electronically, and links to tax packages. If you don't want to make a big deal of shopping, or if you're the type who likes to stick to an established "standard," Quicken is probably your safest choice.

On the downside, some of the descriptive field sizes are too limited. Although Quicken's investment module tracks mutual funds, it won't compute the gain or loss on shares you sold by applying the "average cost" method of accounting. Unless you're willing to do laborious computations manually, you therefore might get less than the best deal at tax time.

Also, Intuit discourages add-on enhancements by not releasing source code to third-party developers. This could be a drawback, for example, if you want to integrate a third-party time and billing package, such as Timeslips. One solution here is to upgrade from Quicken to Intuit's somewhat higher-level version, QuickBooks. QuickBooks handles invoicing and other business functions, but you give up the investment features entirely. You'll thus have to choose between the two.

Managing Your Money

Managing Your Money (MYM) does all the things you'd expect of personal accounting software, except allow the user to separately assign transactions to departments or jobs—a stark omission. It pays bills, reconciles checking accounts, and prepares budgets.

The investment module appears to be particularly strong, reflecting the commissions

continued on page 80

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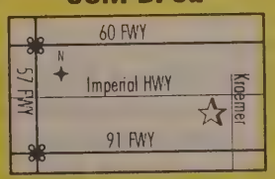

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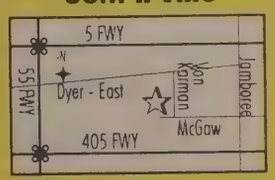

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Accessing CD-ROMs Across The Network

A Look At Three NetWare CD-ROM Server Solutions

Making CD-ROM

drives available across a local area network offers several advantages to providing individual users with their own drives. First, there is the cost of buying and installing CD-ROM drives on each workstation that needs one, as well as the cost of upgrading them later when faster drives become available. Then there is the cost of the CDs themselves. You can really run up a tab buying the same CD title for everyone who uses it; while if you buy a limited number of copies that will be shared, some are going to be lost. Worse than losing a disk, if you rely on time-sensitive databases, someone may mistakenly use an older version CD. Setting up a CD-ROM "server" with several drives and network licensed copies of the software provides LAN administrators with a centralized approach to CD-ROMs that is easy to control and keep current.

Peer-To-Peer CD-ROM Servers

Setting up a CD-ROM server for a peer-to-peer network like Artisoft's LANtastic, Moses Computing's MosesAll, or Microsoft Windows for WorkGroups, is pretty easy. After installing the CD-ROM drive(s) to a "server" workstation, modify the CONFIG.SYS and AUTOEXEC.BAT files to include the CD-ROM driver and MSCDEX.EXE program (the Microsoft CD-ROM Extensions), then add the CD-ROM drive to their server's local resources list. Any PC on the LAN will have access to the CD-ROM drive on the server. (Your LAN documentation should include specific information on how to add and use new LAN resources.)

NetWare CD-ROM Servers

Setting up a CD-ROM server for Novell NetWare 3.xx and 4.xx LANs is a little more involved. I've worked with three NetWare CD-ROM server products: Corel SCSI, Micro Design SCSI Express, and MicroTest DiscPort. Each has a somewhat different approach to providing network users with CD-ROM services.

Corel SCSI's NetWare utilities make it easy to install, maintain, and use a CD-ROM server—and it does this for a fraction of the cost of other CD-ROM server products. It includes software that runs on the server and each client workstation. This is both a blessing and a curse: a blessing because the CD-ROM drive will work as though it were a local drive, and a curse because, like a local CD-ROM drive, it requires a lot of precious conventional memory to load the program modules.

SETTING UP A CD-ROM "SERVER" with several drives and network licensed copies of the software provides LAN administrators with a centralized approach to CD-ROMs that is easy to control and keep current.

The second product, Micro Design's SCSI Express, mounts CD-ROMs on a NetWare server to act like a conventional read-only NetWare volume. This allows the server to cache CD-ROM directory structures and speed up CD-ROM access. Making CD-ROMs act like standard NetWare volumes also allows workstations to "map" them like any other NetWare volume, which preserves precious RAM. SCSI Express is a high-end, high-performance suite of SCSI utilities, but that power comes at significant cost.

SCSI Express is a more complicated product to install (practice installing it on an off-line server before you try installing it on a production unit), and it costs ten times as much as Corel SCSI. For that price I expect a sterling product with great documentation and strong aftermarket technical support; and SCSI Express is technically excellent, as long as you don't step outside the boundaries of what it provides. I found that the Micro Design replacement for Novell's NetWare ASPI disk drivers aren't ASPI-compatible, and as a result most major file server-based backup products won't work on a server running SCSI Express. Still, that's not a major limitation if you can work around it.

What disturbed me most about SCSI Express was Micro Design's support policies. After being shipped the wrong version of SCSI Express by a reseller, I tried to arrange a credit card purchase of the correct version directly with Micro Design, but was gruffly informed that it was a "reseller problem," and I would have to resolve my problem with the reseller. This delayed the installation of my client's CD-ROM server by several days, and gave the impression that Micro Design doesn't care if the end-user is satisfied with its product or not.

Corel SCSI and SCSI Express are both software-based products. The third CD-ROM server product in my round-up, the MicroTest DiscPort, is a hardware solution. DiscPort is a standalone server for up to seven CD-ROM drives. Unlike the

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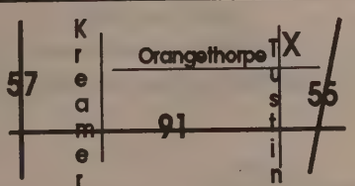

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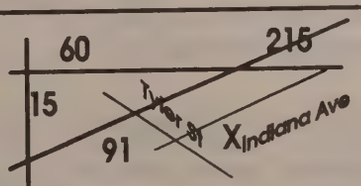

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other CD-ROM servers mentioned here, the DiscPort can be installed without taking a NetWare server down, and it's very easy to install and maintain.

In many ways, DiscPort is reminiscent of standalone print servers, such as the Intel NetPort or HP JetDirect card. Similar to the NetPort, DiscPort is a small box that connects to a peripheral you add to the LAN. Also like any of the better standalone print servers, DiscPort comes with software that makes configuring and maintaining the server a snap.

Priced about halfway between the cost of Corel SCSI and SCSI Express, I'm very pleased with the DiscPort's price/performance ratio. Though I did encounter a glitch while I was installing the DiscPort (see below), the installation process was otherwise straightforward and easy to follow, and the documentation was good. When I did run into trouble, technical support was courteous and helped me find a solution quickly.

The problem I had with DiscPort centered on the CD-ROM drive I was planning to use. I found out the hard way that I needed a "powered SCSI terminator" to get DiscPort to work with this particular drive. Indeed, most of the drives I considered required a powered terminator—something MicroTest doesn't include as standard. Terminators have to be ordered separately, and because this isn't something you can easily pick up at your local computer store, not having a terminator can put a nasty kink in your installation schedule.

A CD-ROM server isn't necessarily the right solution for all networks.

Aside from this one problem with DiscPort, I'm very happy with it. I think DiscPort is the NetWare CD-ROM server solution to beat.

No matter what CD-ROM server you do pick, having a CD-ROM server isn't quite the same as having an individual drive installed on your workstation. Some applications require the installation of an MSCDEX or MSCDEX look-alike support module (which is included with all the solutions mentioned here) before they'll work properly, and multimedia applications don't always work well across a LAN. Although a CD-ROM server isn't necessarily the right solution for all networks, for installations where multiple users often need to share the same CD-ROM resources, servers can be the best method available for making sure everyone has access to the resources they need.■

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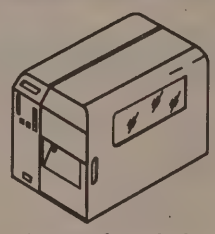

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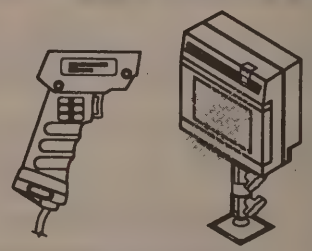

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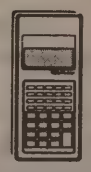

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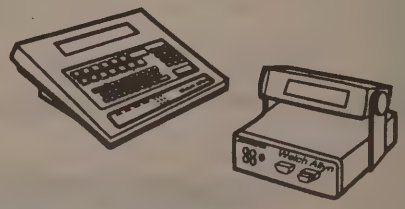

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UNIX • BY BENNETT FALK

UNIX: Whither And Why (Again)

Every once in a while, this space tries to remember why it is that anyone should give two hoots about UNIX (and about sed and awk and all the rest of it as well). Where, if anyplace, is UNIX going and why is it going there?

In part, it is possible to tell where UNIX is going by looking at where it has been. In one form or another, UNIX has been around for twenty-five years. It started out in corporate and academic research institutions (think tanks and whatnot). Early UNIX was the province of full-tilt brainos and their document production centers. UNIX was a tool that let researchers do what they wanted. It also helped them adapt to new hardware without losing productivity.

Eventually, the 16-bit microprocessor was invented, not just once, but several times over, and in rapid succession a number of computer architectures came to market. Rather than invent a new operating system for each architecture, a few cutting-edge hardware vendors decided that UNIX might make business sense, and the late 1970s and early 1980s saw a flood of microprocessor-based, low-cost, multiuser systems running UNIX.

Timesharing

The buyers of these machines were not full-tilt brainos. They were business people, and they bought these computers to achieve a more equitable distribution of computing resources. The dominant computer presence in the business world had been the mainframe, and it was rapidly becoming a bottleneck. Multiuser, timesharing computers would give more people access to business data, and UNIX provided a way of distributing data and computer resources to small groups of people.

The introduction of small, multiuser computers into businesses changed the way businesses organized both people and data. Previously, data processing had been a business function that resided in one department dedicated to information management. With relatively inexpensive UNIX-based computers, individual departments could take control over their own data.

PCs, Networks, And Workstations

The first generation of multiuser supermicros was quickly eclipsed by the introduction of powerful personal computers in the early 1980s. The arrival of personal computers as business tools accelerated the decentralization of corporate data processing.

However, the association of UNIX with hardware vendors endured: UNIX has proven to be a tool for making hardware usable and, therefore, buyable. To this day, the giants of the UNIX industry are hardware manufacturers (Hewlett-Packard, Sun, SGI, and IBM). Perhaps unjustly, the success of UNIX is measured by the success of the hardware vendors that depend on it.

Early UNIX was the province of full-tilt brainos and their document production centers.

Having found in UNIX a stable, scalable operating system, hardware vendors began to experiment. The '80s saw the introduction first of networked UNIX computers, and then the UNIX workstation. UNIX workstations are specialized computers to improve productivity for individuals working in professions (like securities trading and the various forms of engineering) that involve a lot of computation. Workstations combine an extraordinarily powerful single-user computer running UNIX with a graphical user interface and network connectivity.

In a way, UNIX-based workstations were a return to the roots from which UNIX had developed: after all, a lot of the people who use workstations are full-tilt brainos. However, workstations also capitalized on one legacy of the personal computer revolution: a widespread conviction that computing resources should be personalized rather than shared.

Not everyone needs a workstation, however, and PCs became even more powerful, even easier to use, and even cheaper. The UNIX workstation market continues to be robust, but workstations have not become the kind of volume commodity that personal computers are. The UNIX vendors have had to innovate to sustain their rate of growth.

One result of the influx of both workstations and personal computers is increased

reliance on networks to share data. The prevalence of networks fostered client/server application design, and, faced with something less than total success in the desktop computer market, the vendors of UNIX-based hardware now geared up to supply server hardware.

Over the past few years, the marketing emphasis among UNIX vendors has shifted from individual productivity to distribution of both data and computing resources. This may sound familiar: after all, UNIX was first offered to the business community in the late 1970s as a tool for distributing computer resources more efficiently.

But things have changed. In the 1970s distributed resources were a solution to the problems caused by centralized, mainframe-based data processing. Now distribution is a tool of centralization, a way of integrating (or at least standardizing) resources that are strewn all over the corporate environment on desktop-sized islands.

Fifteen years ago, managers purchased UNIX systems to assert their departmental autonomy and take control of their own data. Now UNIX systems are purchased by corporate information managers to establish and maintain "enterprise-wide" business processes.

What holds the modern business together is not its mainframe but its network, and UNIX systems are used both to publish information on corporate networks and to manage the networks themselves. Finally, after appealing to departments, workgroups, and individuals, UNIX vendors have begun to target corporate customers.

The Net And Beyond

The current focus on the enterprise will not last forever. If there is anything like a Natural Law that applies to business, it states that equilibrium is unattainable. No market state is stable for very long, but that's scary because it is not clear where UNIX can go when its corporate customers are not as lucrative as they are now.

Of course, the community of full-tilt brainos (housed in the various public and private research institutions that nurtured the original UNIX systems) has not been idle all this time. From the research community we have the Internet, a large, relatively easy-to-use network of networks that has captured the public imagination.

For those businesses whose corporate network and business processes are closely linked, it's a short leap to imagine the Internet as a prototype for connecting enterprises together electronically. It's not inconceivable that the future of UNIX will depend on its ability to support inter-enterprise transactions over a high-speed public network. Instead of filling out a paper form to buy things from a supplier, you'll simply use a program the supplier gave you to place your order and follow up on it.

This is not as far-fetched an idea as it might seem. Quite apart from the Internet, some business transactions are already handled electronically. Federal Express already provides software that lets its customers track their shipments. Closer to home, we've become accustomed to using credit cards and ATM cards in gas stations and grocery stores. Here, a specialized piece of hardware at the point of sale collects information about the transaction and places a call to the bank that will handle the billing to report the transaction.

The dialog between an ATM machine and a financial institution's central computer is crude compared with the possibilities the Internet offers for mediating business transactions between companies. Instead of specialized hardware (like credit card readers or ATM machines), inter-enterprise business on a public computer network would require client-server applications that could be deployed between businesses. These are still rare: most client-sever business applications are designed for use within the company that developed them.

At least one Internet-based consortium (CommerceNet) is exploring the requirements a public network would have to satisfy to make this possible. One of the issues of concern to CommerceNet is the security of application protocols that would carry business traffic over a public network, and a draft proposal for a secure version of the Hypertext Transport Protocol (HTTP) has been produced. CommerceNet can be reached via the World Wide Web (use the URL http://www.commerce.net to get the CommerceNet home page) or via email (info@commerce.net).

If the companies that make up the UNIX industry take up the inter-enterprise challenge, some interesting things will happen. The hardware vendors will diversify to provide software and services in addition to hardware. There is already widespread recognition that practically no one buys hardware for the sheer pleasure of owning a nice computer. People buy hardware to solve problems, and if you make hardware, you'll sell more of it if you provide tools that apply your hardware to the problems that people have. To survive in the inter-enterprise market, hardware vendors will cast themselves as "solution providers," a role for which software manufacturers and consultants already compete.

Along with increased competitive pressures, there will also be increased demand for products that work together. Products from competing vendors will have to interoperate, so the competitors in the inter-enterprise market will also have to cooperate to some extent. This will either drive the vendors in this market crazy or make them better human beings. In either case, you probably want to bone up on grep and sed and awk because UNIX will be around a while longer. ■

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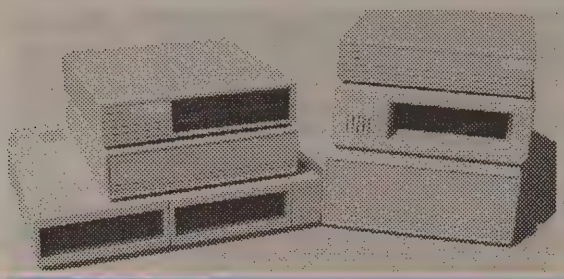

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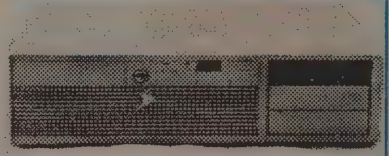

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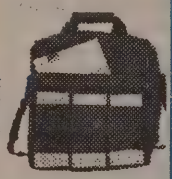

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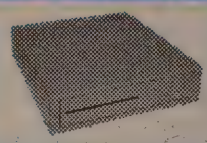

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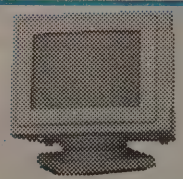

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BY WOODY LISWOOD

Keeping Track Of Your Work Force

Abra 2000 Human Resource Management System Allows Users To Better Record And Organize All Employee Information

Several years ago, my preferred PC-based human resource information systems (HRIS) software was a package costing $9500. That has all changed with the Abra 2000, a surprisingly capable HRIS that costs around $1500 for the unlimited employee version. If you only have a few employees, less expensive versions are available.

Abra 2000 accomplishes everything you would want in HRIS—it does this equally well for companies with only a few employees up to those with fifteen hundred employees. A company larger than that might want to consider one of the more powerful (and more expensive) programs. If your company is small but growing, Abra 2000 will satisfy your human resource needs well into the future.

I have used Abra 2000 to keep track of a 363-employee ski area, with the accompanying turnover you might expect in the resort industry—no hitches, no glitches, just solid performance.

Basic Resource Needs

In the world of human resources, the basic need is to track every employee—with their current, correct information—so that you can comply with an array of government regulations.

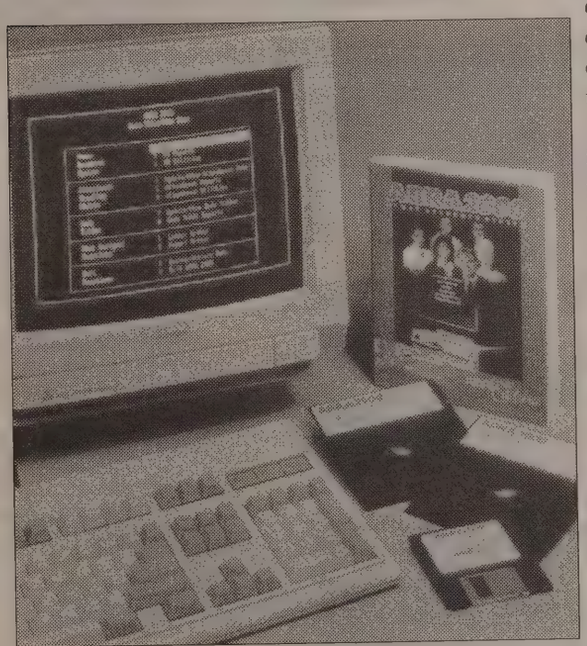
If you haven't experienced them, EEO (Equal Employment Opportunity) and OSHA (Occupational Safety and Health Act) reporting requirements can be a business owner's nightmare. Abra 2000 helps keep down the costs associated with meeting these regulations. It manages the data you will need to complete the necessary reports—that, by itself, is why your Human Resource department should be using this software.

Information about dependents is handled well—if in some what more detail than you might otherwise keep.

How It Works

Abra 2000 is configured as a series of databases with most of the relationships built into the accompanying code and report writer.

It keeps events, such as training programs, in a separate database using the employee number as the key for the relationship. Finding who has attended the new employee orientation program is no problem, a simple query answers the question. Unfortunately, it does not report the negative—who has not attended. An outside report writer can give this information, but this is something that should be available as a custom report from within the Abra 2000 structure. (I complained to customer service, so maybe it will be offered in a future release.)



Abra 2000 presents a variety of screens and coded tables, which give a wealth of information as well as flexibility in customizing the program for your business. On each of the main two employee screens, basic and job information, there are extra fields that can be customized.

Comparatios are statistics that most human resources and compensation professionals use to track salaries in relationship to salary plans or labor markets. If you desire, comparatios are calculated automatically, along with length of service. In Abra 2000, a comparatio is shown on the job screen as salary divided by range midpoint, multiplied by one hundred. In various reports, a comparatio is calculated based on division, department, or even location.

In addition to the main information screens, a complete job history is automatically kept. This is probably the screen I use most. I often need to look up what happened last year to a particular employee, and with Abra 2000 I can quickly check the records.

At the ski area, a second job screen is also useful. We have many employees who work in more than one department. With both job screens I can easily track everyone's job assignments and know who did what and when they did it.

Job codes are tabled, and let you add the required EEO and other coding information. Salary ranges are also coded and can be linked to optional or required tables for lookups in the job section. This is definitely an impressive feature.

The only complaint I had with the main Abra 2000 body of information is that the

Tracking Your Work Force *continued*

unique employee field is alphabetic rather than numeric. I would prefer to have a choice. Since I use a numeric system I had to improvise a coding structure to get the sorts I wanted.

The Benefits screen can also be customized to contain as many benefits as your company might offer. Each benefit is maintained as a coded field that can be linked to a formula and automatically applied as each employee becomes eligible; for example, your insurance program might automatically start on the first of the month following the month in which the employee completes thirty days of employment. All the necessary information is easily calculated and available for reporting and paying the bills. This approach can save you hours of reconciliation when it comes to benefit billing time. This information can also be manually inserted.

A separate screen is available for working with your company's 401k plan. You can enter the employee deduction as a whole number or a percentage as well as adding any employer contributions.

Information about dependents is handled well—if in somewhat more detail than you might otherwise keep. Names, relationships, ages, social security numbers, and benefit plan eligibility are kept for each dependent. However, Abra 2000 does have its peculiarities. When an employee decides to add medical coverage for their dependents, I would usually open the benefit screen for that employee and change their plan coverage to "employee plus dependent coverage." But Abra 2000 requires that you also modify the dependent record to make them eligible for that particular benefit before the change is reflected in the cost report. This means you must change two screens rather than a single screen.

The Skills screen keeps the information, linked to a coded table, about what an employee is trained to do. Each skill you are tracking must be added to the table.

An Events screen works the same way. You must first code an event before using it to track which employees have completed the event.

I particularly like the Wellness screen. Here information is kept about blood type, drug testing results, blood donations, and allergic reactions among others.

The Urgency, or what I call the emergency contact, screen includes space for both home and work contact numbers. We had, for example, a new ski patroller run into a tree branch and get knocked unconscious. I was able to quickly look up the emergency contact to notify our doctor that the injured ski patroller was being driven to the hospital as well as notify her family of a possible problem. Luckily it was just a mild concussion and not a serious injury.

Lastly, an OSHA screen keeps track of work-related accidents and illnesses. The information from this section lets you complete the required OSHA forms for posting and reporting. This screen saves endless hours in report preparation.

Reporting

Abra 2000 has many built-in reports, which should provide most of the basic information you will need. Except for some of my more specialized reports, everything works smoothly.

Complete reporting about personal and benefit information is available. It will even automatically present you the COBRA let-

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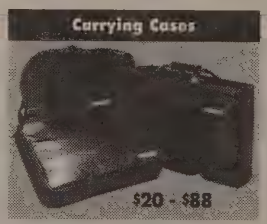
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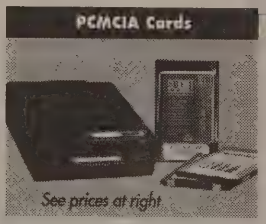
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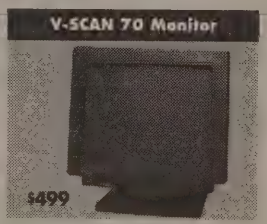
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Tracking Your Work Force *continued...*

ters that must be sent to each terminating employee as well as prepare mailing labels if needed.

There are many compensation reports built in, most of which I find useful. Performance reviews are available by due date, a necessity for modern human resource management. There are new hire logs, and a variety of salary analysis options, which can be reported by job code, department organization, or even by title, depending on how you organized Abra 2000.

The EEO reporting section has the standard EEO reports as well as a special I-9 verification report. The OSHA section tracks by date, by employee, by location, and by type of accident, and does both the OSHA 100 and 200 report.

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Other Features

Establishing records for multiple companies is easy with Abra 2000. For instance, I keep one "company" for my current employees and another "company" for those who terminated during the year. This keeps every employee's record available if I need it for past employment verifications, credit history requests, etc. Abra 2000 has a little anomaly here. When I transfer an employee from the active to the terminated company, all of the information is transferred including everything in all the subsidiary databases. But the employee is not eliminated from the main database until I formally do this. Transfer, in Abra 2000 language, means to make a complete copy.

Abra 2000 has a functional custom report writer built into the database. I had been warned that the report writer was very weak. With only a minor exception or two, this is simply not true. I am able to get every custom report I need from the Abra 2000 report writer.

Abra 2000 also has a Letter Writer. Here custom letters about COBRA or even custom benefit statements can be produced.

The documentation is reasonable. It gives examples of all the databases and shows you the dBASE format for each of the many files it uses. The documentation is sprinkled with screen shots, and is easy to follow and understand.

However, everything in Abra 2000 is so obvious that you might never have to use the documentation. Other than checking how to write a complicated benefit formula for my benefit codes and to see how to write a formula in the report writer, I have not used it for anything else.

Abra 2000 is part of an extensive software system from Abra Cadabra. You can acquire attendance, org charting, applicant tracking, resume scanning, payroll, training, position control, and others.

Technical nN

Abra 2000 is Clipper based, so the file structure is standard dBASE. I've used dBASE, Superbase, Access, and Paradox for Windows to work on Abra 2000 files with absolutely no problems.

Lastly, since Abra 2000 is a DOS-based program, my computer is 100% Windows except for Abra 2000.■

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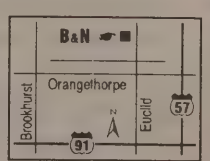

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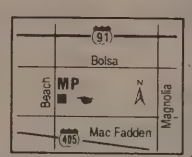

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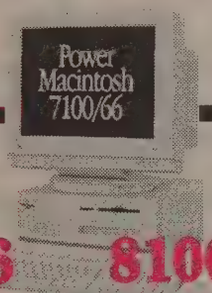

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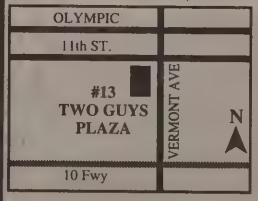

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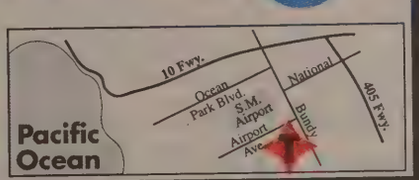

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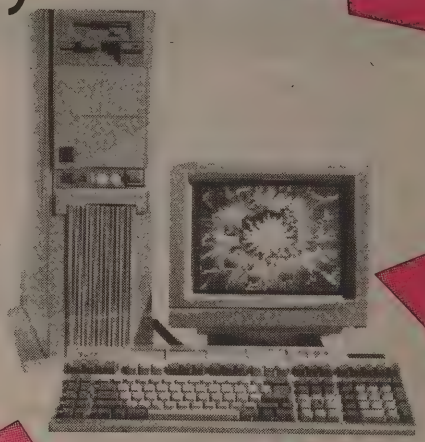

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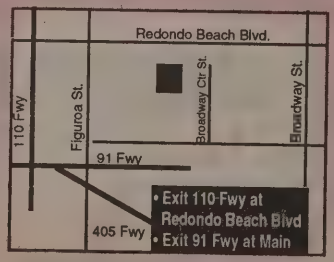

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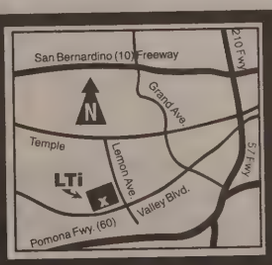

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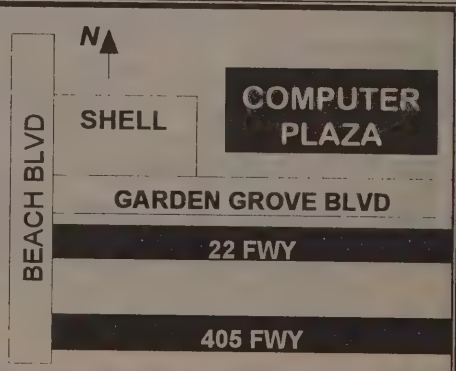

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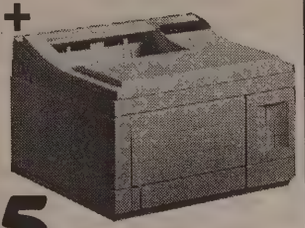

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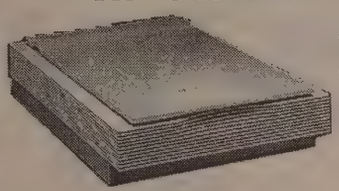

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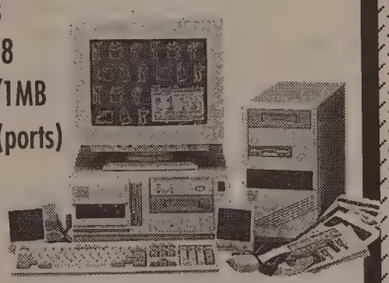

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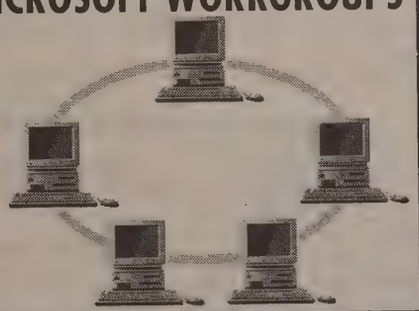

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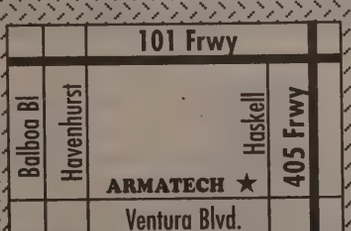

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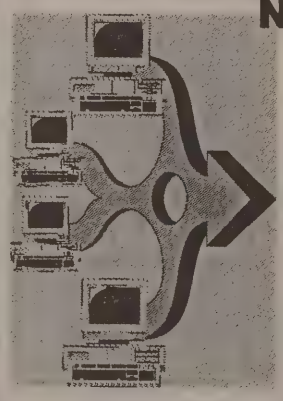

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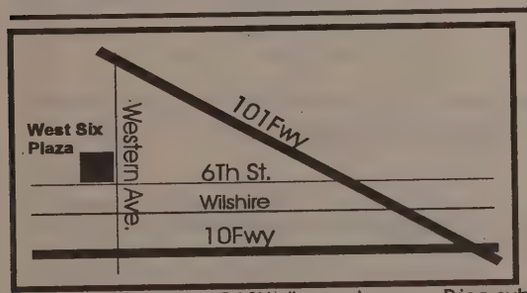

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MicroMARKETPLACE

Accounting...*continued from page 58*

MYM earns when you trade securities online. But as with Quicken, MYM doesn't compute the average cost of mutual fund shares for tax purposes. Who knows what, if anything, these vendors were thinking when they omitted this feature. I never much cared for doing the computation by hand, and clients don't like paying for it.

MYM has much of Quicken's "look and feel," just as Wendy's French fries resemble McDonald's. It seamlessly integrates with a variety of other programs, letting you compute taxes, and you can use your modem to pay bills, do banking, get stock quotes, and buy and sell securities. It also includes an appointment calendar, a to-do list builder, and various other goodies.

The program is easy to install and use. MYM also offers a conversion utility, Quicken Import. But although MYM promises that you can "upgrade easily," the conversion is time-consuming; each Quicken account must be separately imported and exported. Moreover, some types of Quicken data, such as payee lists and investment information, can't be imported at all.

In The Black

The philosophy behind In the Black (ITB) is to give the consultant everything needed for accounting, billing, and contact management in one package. Although priced as personal accounting software, ITB approaches the next notch up, handling payables and generating invoices. The descriptive fields of the invoices, however, are limited in length and the format appears more closely suited to selling merchandise than professional services.

ITB's claim to fame is its contact management capability. It makes little sense to have an accounts receivable function that only generates bills and records payments, without using that same database to keep track of prospective clients and contacts. ITB, recognizing this deficiency in low-end accounting software, built contact management into its package.

This capability is especially useful for independent contractors and consultants needing a convenient way to generate mailing lists and track callers and prospects who aren't yet clients.

To manage these functions, ITB is built around an advanced (R:Base) database engine, and is thoughtfully integrated to take advantage of its database capabilities. In the Black not only tracks departmental activities, as does Quicken, but additionally tracks sub-departments as well. If accounting control procedures are an issue, ITB is designed to leave an audit trail, which is part of your system of internal control.

Kiplinger's CA-Simply Money

Computer Associates took a novel approach to marketing Kiplinger's CA-Simply Money by giving it away for just the cost of shipping and handling, $6.95.

The design of Simply Money is also novel, taking the graphical interface further than any other Windows personal accounting package I've seen. It makes extensive use of icon buttons that you drag around the screen. For example, to pay a bill, you would drag a checking account icon to the write-check icon. To record a check deposited in your credit union, drag the check icon to that credit union account icon. To set up a new account, drag the account icon and drop it on the setup icon. No debits and credits to mess with here!

As with MYM, Simply Money has snazzy portfolio management capabilities, letting you track gains and losses, dividends, margin interest, and security prices. But like the others, it won't compute gains and losses on mutual funds by the average cost method, so you may be overpaying your taxes.

When you need a report with Simply Money, guess what? You click an icon. There are over fifty predefined and customizable reports. Simply Money also generates graphs and has many "ease-of-use" features. The program memorizes all your transactions for quick recall, and a protective option keeps you from cluttering your pop-up lists with one-time payees. Overall, ease-of-use is remarkable, especially if you're partial to mice.

The Step Beyond Personal Accounting Software

Although these packages are all inexpensive, your time may not be. If you're seeking a specific feature, call the vendor before investing a lot of trial and error in the software.

The key aspect of personal accounting software is its simplicity. So resist the temptation to buy more than you need. A package costing more is not necessarily worth more to you if its complexity is so burdensome that it hinders more than helps.

If you aim to keep it simple, but need a few more features and capabilities than offered by personal accounting packages, consider entry-level business accounting software. These are more expensive but also more powerful. Most are sufficiently intelligent to perform the variety of accounting tasks needed by small businesses. Their capabilities, though, vary considerably, so you'll need to review the features thoroughly.

A recent discussion comparing and critiquing entry-level accounting software appears in the Journal of Accountancy (June 1994). The article, by three accounting professors at California State University, Fullerton, also lists resources for obtaining additional information, so you can ensure important criteria are not overlooked. If you'd like a reprint (with permission from the American Institute of Certified Public Accountants), please call my office at (510)893-5753. ■

RESOURCES:

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Kiplinger's CA-Simply Money, $6.95
Computer Associates International, Inc.
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Quicken, $69.95
QuickBooks, $159.95
Intuit Inc.
P.O. Box 3014
Menlo Park, CA 94026
1-800-624-8742

In the Black, $89.95
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Bellevue, WA 98007
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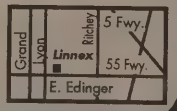

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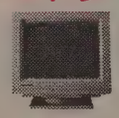

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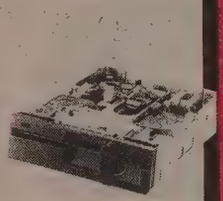

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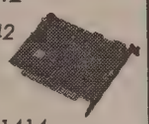

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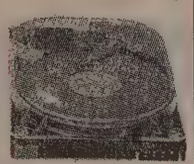

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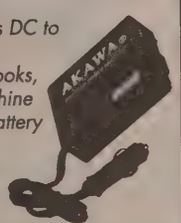

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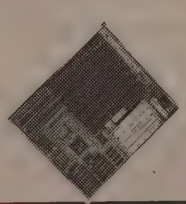

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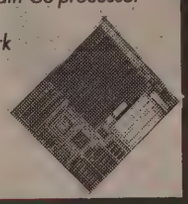

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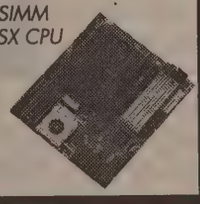

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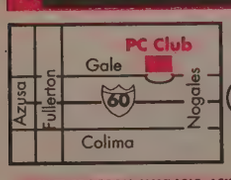

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CENSORSHIP ON THE NET

EFF Staff Counsel Mike Godwin On Legal (And Other) Issues

By Mary Eisenhart • Photo By Susan Muniak

"Freedom of the press," said A.J. Liebling in one of the most oft-repeated quotes of the computer age, "belongs to those who own one." Desktop publishing and, more recently, the explosive growth of the Internet have enabled a degree of self-expression and controversy undreamed-of in the barely post-Gutenberg era of the Founding Fathers.

The recent obscenity prosecution of Robert and Carleen Thomas, sysops of the Milpitas-based Amateur Action BBS (self-described as "the nastiest place on earth"), as a result of files downloaded in Tennessee has reopened debate on the censorship issue—who can and should set the standards for what others say and do online?

Criminal prosecutions for content, from the notorious E911 document of a few years ago to the ubiquitous mega-X-rated graphics, are just part of the story. Equally controversial to some online constituencies are, for instance, America Online's policy of not allowing the Seven Forbidden Words (and most of their synonyms) to be posted online, and Prodigy's practice of screening responses before they're posted. At the same time the Thomases were making headlines, there was a mini-tempest on Usenet as the Unitarians tried to start their own newsgroup and encountered loud opposition from some self-proclaimed Christians who denied the right of "heretics" to virtual assembly.

In an attempt to clarify some of the issues and cut through some of the hysteria that surrounds them, we sat down for an extended discussion with attorney Mike Godwin. Godwin, a frequent speaker on legal issues relating to cyberspace, is a longtime veteran of the online world and presently serves as staff counsel for the Electronic Frontier Foundation.

Let's start with some groundwork. What are the legally recognized limitations to the First Amendment?

The way to understand the First Amendment is that it creates a presumption that anything that you say or that you write can't be barred, can't be punished, can't be limited by government. There are various carveouts that represent accom-

modations the Supreme Court has tried to strike between First Amendment interests and other social interests.

For example, libel comes to mind. With libel, we have the courts recognizing that there's an interest in protecting people's reputations, and that this interest may come in conflict with the interest of protecting a free press and freedom of speech.

Libel is necessarily a false statement?

Yes. Libel is a false statement that tends to damage the reputation of another. Of a living person, by the way.

Obscenity is another exception. The court has wrangled many times in the 20th century with the issue of obscenity. If you'll recall, there were many cases in the '50s and '60s in which people were prosecuted for obscenity, for things that we would not think of as obscene today—for example, Lenny Bruce's monologues.

James Joyce's Ulysses.

That's right. *Ulysses* is a very good example.

But what happened was, of course, that people would publish magazines of even the hardest-core pornography, in which they would include short little essays explaining how this stuff was good for you, how it was good to free your fantasy life, and so on.

And the Supreme Court never liked that very much. [*laughs*]

In the early '70s, the Supreme Court justices were making individualized determinations as to whether films were obscene. So they actually had a screening room in the Supreme Court. Every time a movie like *I Am Curious: Yellow* would come before the court, they'd go screen it; and the justices would make an individual determination as to whether it was obscene or not.

Chief Justice Warren Burger, who'd been appointed by Richard Nixon, hated that practice.

Because he didn't like having to watch the movies?

On the one hand, he didn't like pornography. On the other, he thought it was demeaning to the institution of the Supreme Court for everybody to be viewing these dirty movies.

It was very interesting. There were some justices who wouldn't see the films because they didn't want to view dirty pictures, and they would vote for upholding the conviction. And then there were Justices Douglas and Black, who wouldn't view the movies because they held, as a matter of principle, that the First Amendment should just allow them. So they didn't need to see the films to know that they were going to vote to allow them.

It was all the justices in the middle who would go see the films.

Is there a legal definition for pornography?

No. There's not a legal definition of pornography. Many people get confused on this; they hear about pornography and obscenity, and they think that pornography and obscenity are the same thing.

Pornography is essentially artistic work or writing that's designed to be sexually arousing. But not all of that stuff is obscene. For example, many people find the pornographic works of Anne Rice arousing, but they're not obscene. There's no question that they wouldn't qualify as obscenity.

So what is the legal definition of obscenity?

Obscenity, according to the Supreme Court, occurs when certain things happen.

One of them is that your state has to have passed an obscenity statute in which it defines with specificity what kinds of sexual acts are barred. In fact, one of the amusing outcomes of that practice is that we now have detailed descriptions of various kinds of sexual acts in state statutes around the land. You can imagine the legislatures dealing with these issues.

The second thing is that the jury at a trial has to make a determination as to whether the work which depicts those sexual acts appeals to the prurient interest, as a "reasonable man" applying the contemporary community standards would interpret it. Prurient interest just basically means that it's arousing.

It has to depict that stuff in what's called a patently offensive manner.

Which of course is completely subjective?

Well, supposedly a juror would not apply his own standards, but would apply the reasonable community standards. As a practical matter, no one knows what jurors apply.

So it's obscene if it depicts, in a patently offensive way, sexual acts specifically described by state law, in a manner designed to appeal to the prurient interest,

"Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances."

With Bruce's monologues there was never any realistic chance that anyone would ever be sexually aroused by one of them. He used profanity, he talked about sex, sometimes in very graphic ways. He talked about these things in ways that many people found offensive.

In the '50s and '60s you saw the Supreme Court trying to find a way to strike a balance between what was acceptable and protected by the First Amendment and what was not. What you found was that they were unhappy with any formulation prior to the early '70s.

The test for a while was whether there was any redeeming social value to the work.

Which is indefinable.

That's right. A court would make that determination.

as judged by a reasonable man applying the contemporary community standards.

The first part is statutes; the second part is community standards. But even if it flunks Test 1 and Test 2, Test 3 is that there's got to be an absence of significant literary, social, artistic, political or other value to the work.

So you might have a work that was actually very graphic, and depicted a graphic sexual act, and it might also be designed to be arousing, but if the work as a whole had serious literary, artistic, or social value, it would be not obscene.

Now of course we can imagine many communities in which the kind of hard-core pornography that one can find in California or New York state would fail all three tests.

Let's address the community standards issue. What is the legal formulation of "community standards"?

There isn't really a further definition of it that has any meaning. Community standards, as defense lawyers will always tell you, is what twelve jurors think.

So to take the situation of the Amateur Action board, which is rather more complex than popularly thought. Consider, for example, the type of download that some guy on the WELL characterized as "Bubbles and her Shetland pony demonstrating the client/server relationship." Realistically speaking, where does that fit in with community standards? It does not appear to me that the average person in Milpitas would find it any more acceptable than the average person in Kansas.

Well, that's true. But on the other hand I think that a jury in Milpitas probably won't convict. Not because they think it meets community standards, but because there's a widespread attitude in California that pornography should not be banned, and that the police should be up to other things than shutting down pornography distributors.

It's always hard to second-guess what the juries are doing. Some people would say that is community standards in action.

The Statement by Amateur Action's attorney that the case would never come to trial in California has been called into question; in fact the San Jose police department has been quite interested in this board for a while.

But why didn't they prosecute? They could have set up a case a long time ago. There's a very strong sentiment in California to leave people alone.

Moving from garden variety pornography to a different legal category, what is child pornography?

It's very important that people think clearly about this, because child pornography is a wholly separate legal category from obscenity. For one thing, there's no community standards that allow child pornography. It's a federal crime, and you can't escape liability by appealing to community standards, and you can't escape liability by appealing to the notion of significant social value.

So if the mayor of your town is the president of NAMBLA, that still doesn't count.

Right. It doesn't save you. It doesn't save you if the work might have some genuine literary, artistic value.

Just for the record, what is the legal definition of child pornography?

The federal statute specifies that it is the visual depiction of a child engaged in sexual or lewd and lascivious conduct. A real child has to be used in the manufacture of that material.

So, for example, photographs like Jock Sturges's photographs of young girls on nude beaches in France would not qualify as child pornography, because they weren't engaging in sexual activity or in lewd and lascivious conduct.

This didn't keep Sturges from getting into a whole lot of legal difficulty a few years ago though.

Well, that's right. But he was ultimately vindicated.

At great personal cost.

We always have to distinguish discussions of what the law says from discussions of whether it's tough to get prosecuted. There's no question that Lenny Bruce's material was not obscene, but that doesn't mean he didn't have to go to court a lot of times to vindicate himself, or that he wasn't in fact convicted in lower level courts. He was.

It's one of the hard things for people who are not lawyers to grasp—even if the law is on your side, that doesn't mean that you're not at risk.

Another example of material that many people think would be child pornography, but isn't, would be a computer-generated image of children engaging in sexual activity, images in which children had not been used. Or any textual material describing sexual activity of children. It might be obscene, and it certainly might be offensive, but what it is definitely not is child pornography.

Similarly, taking a photo of an adult porn star and morphing it down to her seven-year-old self doesn't qualify?

Right.

If I remember correctly, though, there have been successful child pornography prosecutions for use of underwear ads from the Sears catalog in another magazine.

There's a case having to do with the use of pictures of children where the children are clothed; the issue in his case was whether the lewdness and lasciviousness part was on the part of the viewer. As I recall it, the defendant was ultimately acquitted. The law was construed as requiring lewdness and lasciviousness in the image itself.

This raises kind of the same issues as something on Amateur Action—the fact that amid "child-sex" images that turn out to use adult models are non-sexual nude family photos taken at nude beaches, which take on a whole different meaning in that context.

It is rather similar, and I think we're going to see how that falls out in the Utah case. I haven't seen the indictment, but what I have been told is that the Thomases have been indicted in Utah on child pornography related counts.

To the best of your knowledge, the indictment is based on photos that, in another context, would not be considered child pornography?

That's correct.

Assuming for the sake of argument that the people in that photo did not consent to have their likenesses used in this manner, which strikes me as extremely likely in many cases, what recourse do they have? And how are their rights balanced against the First Amendment?

continued on page 90

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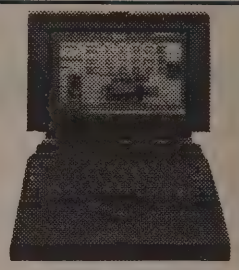

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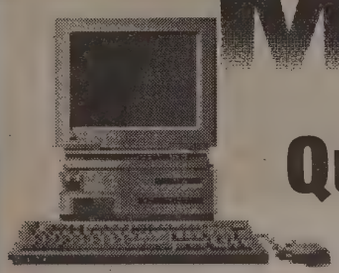

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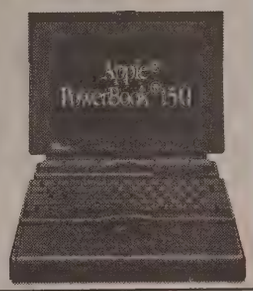

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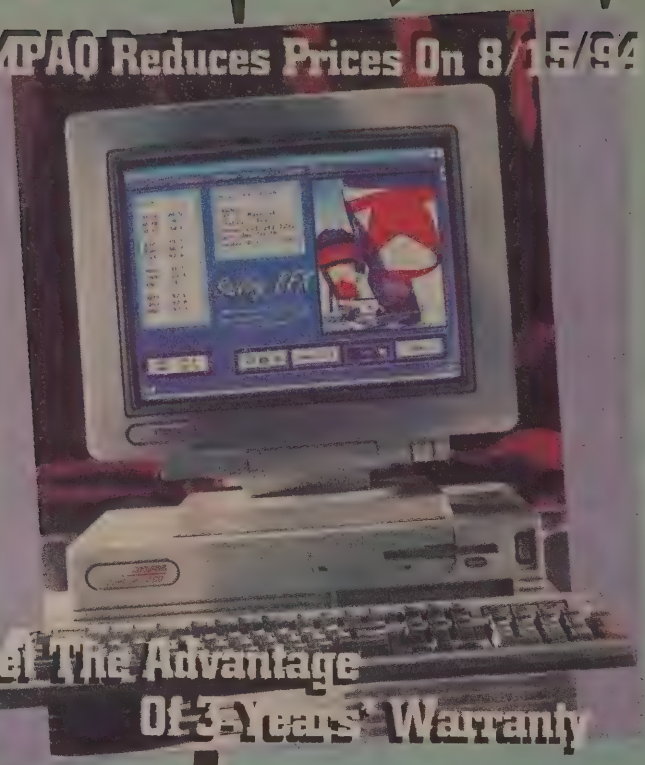

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CENSORSHIP

continued from page 84

They have no recourse through the criminal justice system at all. They'd have a civil claim, perhaps, of invasion of privacy against the people who reproduced the image. But you have to remember that even though the people at nudist colonies are not consenting to have their images circulated on pornography-oriented bulletin board systems, it does undercut a claim of invasion of privacy that they did voluntarily have those shots taken.

Okay, for another example—you have a baby daughter. I expect that like all parents I've ever met, you have naked baby pictures of your daughter. Suppose one of your political enemies somehow obtains one of these photos and uploads it in such a context across the net. What recourse do you have?

Well, I might again have an invasion of privacy claim, for appropriation of my daughter's image. But there would be no criminal recourse, normally.

Except for a possible criminal copyright violation, since presumably we're the copyright holders of pictures of our little girl.

Playboy has been quite assiduous in prosecuting, on intellectual property grounds, people who scan and upload their centerfolds. Is that a separate issue? That gets lumped under "censorship" too, which is kind of funny.

Well, the subjects of censorship and intellectual property do intersect, though not always in a very simple way. There is a criminal action related to criminal infringement of copyright when individuals take images and resell them without the permission of the copyright holder. In that sense, there could be a criminal action.

But it's far more likely that *Playboy* will proceed as it has proceeded in the past, by pursuing civil remedies.

Going back to the issue of Amateur Action being prosecuted in Memphis, and the issue of community standards in cyberspace—address that issue a bit.

I think there are really two issues that are raised concerning community standards by this Memphis BBS prosecution. The first one is whether it makes sense to apply community standards at all. We increasingly have communities that are not defined by the accident of geographic location. Maybe it doesn't make sense to try and apply the community standards doctrine anymore, at least in this context.

But the other approach to the issue is to say, "Look, even if we think that community standards are a good thing, here's a case in which community standards have been applied inappropriately." I would argue it this way.

In the past, pornography producers have been prosecuted in remote jurisdictions when they have mailed or broadcast materials into those jurisdictions. Part of the reason jurisdiction was upheld in those cases is that they have committed a conscious act to have an effect in a remote jurisdiction.

The bulletin board case is rather different. When we're talking about the downloading of images; we're normally talking about an automated system that responds to anyone who's a member, who dials up and chooses to instruct the software to make the transmission. That could happen when the sysop is engaged in dream sleep. So there's a real question as to whether it makes sense to prosecute the sysop for committing a conscious criminal act for something his computer did.

But on the other hand he consciously set up the BBS to disgorge software on demand.

Well, but it's perfectly legal to disgorge software on demand where he is. He set it up for a perfectly legal purpose. If he set it up to only accept phone calls

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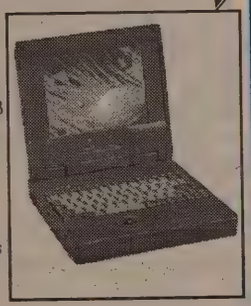

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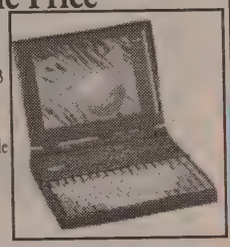

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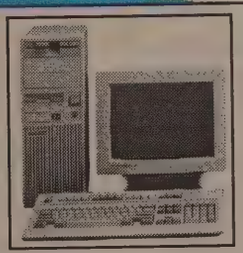

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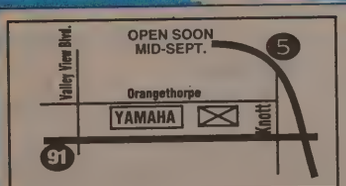

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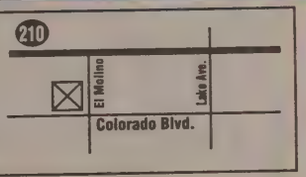

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CENSORSHIP *continued*

from Tennessee, or only accepted members from Tennessee, then I think you'd have a tougher case. But that's not what he did.

Taking it further, as communications become more global, what about somebody dialing in from Singapore or some other country where this kind of content is illegal?

Remember, community standards is an American approach to obscenity issues, and it may well be that the laws of foreign jurisdictions don't pay any attention to community standards. If somebody dials in from Singapore and downloads pornographic images from a bulletin board in the United States, it's at least theoretically possible that Singapore's criminal laws would thereby be violated. But I doubt that the United States would extradite the sysop in that particular case.

A similar situation might arise from somebody in Iran downloading a copy of The Satanic Verses from some site.

I love that example because I invented that example.

The United States will normally extradite with countries that it has extradition treaties with, in cases where it doesn't violate due process for American citizens. Normally, even if there were an extradition treaty with a fundamentalist Islamic country, the United States would not extradite somebody who had committed a religious crime.

So the student at the University of Tehran telnets to some server in a country where Satanic Verses is legal and downloads it—he's still at risk from Iranian law, but is anyone in the country where the server is located at risk?

I'd say the risk is minimal and perhaps nonexistent. Publishing *Satanic Verses* was perfectly legal in every country in which it was published.

As the net becomes more global, you're going to have more and more messages flying around that are highly illegal in some countries and just fine in others. Suppose someone out of the country starts posting detailed death threats to Clinton on newsgroups widely read in the US?

In the United States, it's important to recognize that the mere advocacy of illegal activity is protected by the First Amendment. There's a case called *Brandenburg vs. Ohio* from the late '60s in which that was established. Whereas speech that causes a riot, that causes what's called "imminent lawless action," and is designed to cause such action, can be banned or punished.

But that standard gives a lot of leeway for people to advocate illegal activity, and it's unlikely that the United States legal system would ever extradite anyone for advocating illegal activity in other countries, and it's unlikely that the United States would ever try to punish anyone in a foreign country who merely advocated illegal activity here.

Take the situation analogous to what we encountered with the E911 document; suppose a US board is carrying a newsgroup in which foreign residents are actively plotting to, say, blow up the World Trade Center. Is the sysop of that board at risk from US law for carrying the content? What if they're doing it in email?

He's certainly not at risk unless he knows about the conspiracy. He can't be held liable unless he knows about the conspiracy and is either a co-conspirator or is acting in a way that aids and abets the crime. That normally involves knowledge.

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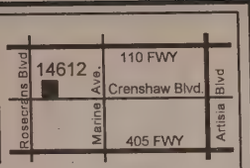

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Are there any other instances of government censorship of content that do not involve obscenity or libel?

I think the computer crime cases and computer searches and seizures that we were seeing in the late '80s and early '90s reflect some government disturbance about people sharing information on how to bust computer security, how to engage in telephone fraud, long distance code trading, and credit card number trading, and so on.

Where does that stand at this point?

I think there's a consensus that the sharing of how-to information is protected by the First Amendment, but the actual trading in codes and card numbers is not protected.

Just as it's been upheld that you can print instructions on how to build an atomic bomb, but you'd be on thin legal ice if you detonated one.

That's right. Or if you built one.

Going into the considerably murkier waters of non-government censorship, let's take the case of Canter & Siegel and the ensuing cancelbots.

Basically you had two lawyers in Arizona who were admitted to the Tennessee bar but who were practicing immigration law, who sent an ad for their services to almost every newsgroup in Usenet, regardless of the appropriateness or lack of appropriateness of the content.

Well, most people on Usenet were very upset by this, but Canter & Siegel were unrepentant and they said they were going to do it again. So a number of people on the net forged cancellations of their messages.

How does that work?

Usenet has a newsgroup in it called the control newsgroup, and commands having to do with cancellation of messages are posted there, as postings to that Usenet newsgroup. Normally if you cancel your own message on Usenet, you have in effect posted a cancellation to the control newsgroup, and that cancellation message propagates out to the net in the same way your original message did.

Well, once you know this, it's trivial to forge a cancellation message to make it look like the originator of the message is trying to cancel it.

Does this then nuke all messages coming from this source?

It will go after particular messages, normally. A control message won't kill everything by a particular person, but it will kill a particular message.

So people did this in order to kill particular messages from Canter & Siegel, and some people even automated the process to the point of forging cancellations for any messages that appeared from Canter & Siegel.

And one person who did this did it from abroad, and when people complained to him "What about the First Amendment?", he quite appropriately responded that he's not bound by the First Amendment. He lives in Norway.

But is the First Amendment applicable at all, because this is not a government agency?

Right. Strictly speaking the First Amendment is not applicable at all. Loosely speaking, people often say "First Amendment" and use those words to invoke the general principle of freedom of expression, which I think most people believe does apply both to private individuals and to governmental entities.

Yeah, but do the courts hold that?

No, of course not. It's a philosophical invocation.

So there is no legal reason why someone couldn't cancel Canter & Siegel postings indefinitely?

To my knowledge there is no legal barrier, within or without the United States, to the forging of cancellation messages.

First of all, it's important to distinguish cancellation messages from so-called cancelbots. Cancellation messages are individualized. A person normally makes a conscious decision to send a cancellation message.

A cancelbot is a bit of software that generates cancellation messages, but there are upper limits to what cancelbots can do. A cancelbot could certainly delete everything posted by a particular user, but it couldn't be expected to look for particular content. It could look for particular words, but it couldn't look for particular content.

So for example, there's an infinity of messages that could be written critical of Islamic fundamentalism. But no cancelbot could ever pick those messages out. What could happen is that someone could say, "Mike Godwin's posting messages critical of Islamic fundamentalism," and then somebody might do a cancelbot to cancel every posting from me.

Is there any legal guarantee of an audience? Is there a legal guarantee of distribution?

Absolutely not. There is no law that requires that people be heard.

Does the issue come up under contract law, like within a user agreement of a particular system, that would govern this sort of thing?

Perhaps, but even that would be of limited value. If you're on AOL and you post a message to Usenet, you may have a contract with the management of AOL forbidding them from canceling your postings. But that doesn't mean that someone who's not party to the contract couldn't cancel it.

Yeah, and in fact when AOL's Internet gateway first opened, a lot of their users were so culturally clueless about the net that some newsgroups and mailing lists automatically canceled anything that originated from AOL for a while. And there was great whining about "censorship" for that.

That's right, and I don't think the whining was wholly unjustified. There are certainly people who had worthwhile things to say, and they sent their post from AOL and they were shut up.

But they had no legal standing for their complaint?

To my knowledge, they don't.

So what about the recent situation where the Unitarians wanted to start a newsgroup and a group of fundamentalist Christians launched a campaign to deny their request on the grounds that they were heretics?

There is a voting procedure on Usenet for the establishment of newsgroups within the normal hierarchies, the non-alt hierarchies. And there's an attempt

continued on page 148

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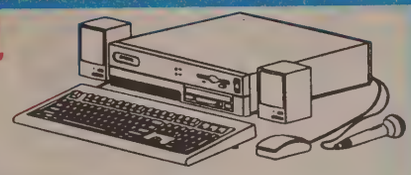

486SX-33MHz CPU • 200MB Hard Drive • 4MB RAM expandable to 32MB • 3.5" 1.44MB Floppy Drive CD-ROM drive (dual-Speed) • SoundBlaster 16 Audio Board • External speakers and microphone • Local BUS video graphics • 2 ISA expansion slots • Internal fax/modem • Mouse • **Preinstalled software:**
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PRESARIO 660 340MB SYSTEM

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Local BUS SVGA 3 ISA expansion slots • Internal fax/modem
Preinstalled software: MS DOS
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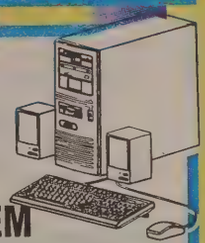

486SX2-66MHz CPU • 340MB Hard Drive • 8MB RAM expandable to 56MB
CD ROM drive (Dual-Speed) External Speakers and Microphone • 5 ISA expansion slots • Supports Intel OverDrive processor(486DX2/66), as well as future OverDrive processor with Pentium technology
Preinstalled software: MS DOS • TabWorks • MS Windows 3.1 • Microsoft Works • CD ROM titles
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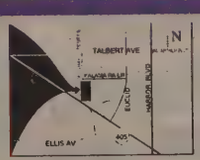

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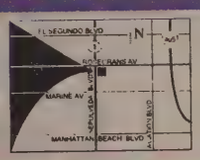

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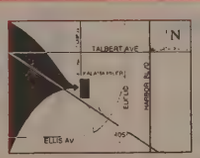

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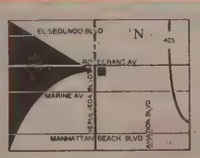

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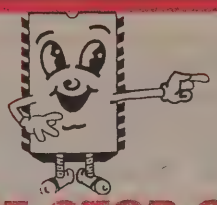

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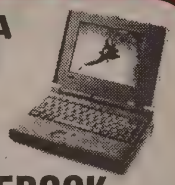

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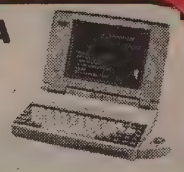

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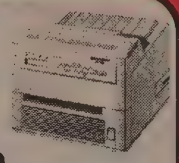

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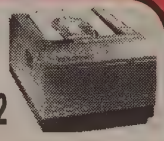

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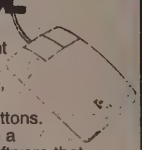

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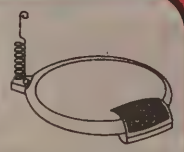

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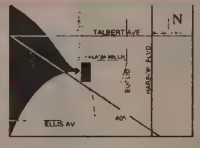

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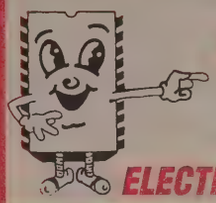

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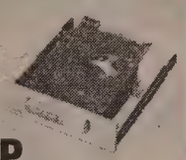

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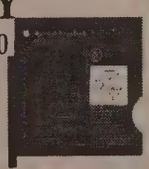

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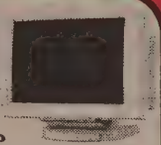

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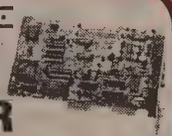

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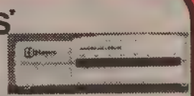

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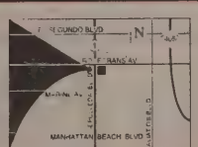

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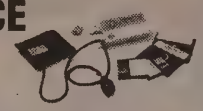

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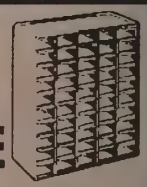

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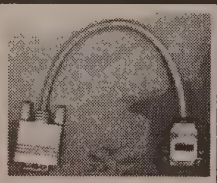

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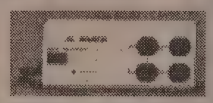

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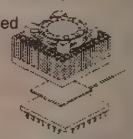

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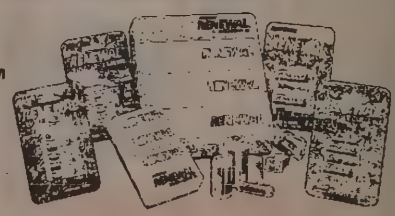

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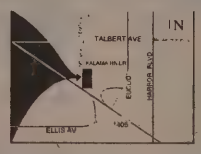

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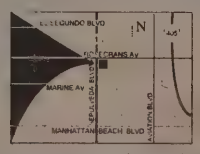

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Product Spotlight

UPDATES

• **Aladdin Systems** released **Stuffit Expander 3.5**, a major upgrade to its freeware product that gives Mac users an easy way to expand compressed files downloaded from online services. Aladdin Systems, 165 Westridge Dr., Watsonville, CA 95076. (408)761-6200.

• **Autodesk's Multimedia Division** is offering a **special promotion of AutoVision 1.0, including a copy of RenderPrint** from Insight Development Corp. The suggested retail price of $595 for the package will be available until September 30, 1994. Autodesk, Inc., 2320 Marinship Way, Sausalito, CA 94965. 1-800-879-4233.

• **Canon Computer Systems** has launched a three-part program to expand its small office/home office user base. The program includes a **full-line rebate offer, the new BJ-100 Bubble Jet printer, and an upgrade for the BJC-600 color printer**. Canon Computer Systems, Inc., 2995 Redhill Ave., Costa Mesa, CA 92626. (714)438-3000.

• **DataViz** shipped **Conversions Plus for Windows v2.5**, the latest version of its file translation software. Upgrades from earlier versions are $39.95, while the suggested retail price is $149. DataViz, 55 Corporate Dr., Trumbull, CT 06611. (203)268-0030.

• **FastTrax International** has released **FastTrax 5.0**, which is 20% faster and delivers greater Windows, DOS, and OS/2 performance. Upgrades cost $30, competitive upgrades $40, and retail price is $70. FastTrax International, 880 Ensenada Ave., Berkeley, CA 94707. (510)525-3510.

• **Lotus** announced **Lotus Approach Release 3.0**, a new version of its end-user relational database for Windows. It is available for an introductory price of $129 until December 31, 1994, after which the price will be $495. Upgrades from Approach 2.x and SmartSuite 2.1 are available for $79. Lotus Development Corp., 55 Cambridge Pkwy., Cambridge, MA 02142. (617)577-8500.

• **Lucid** released **v3.0 of its Energize Programming System**. Energize 3.0 is available on Solaris 2.x and SunOS 4.1, and is available free to current Lucid support customers; otherwise it's $4250 for a single unit, or $2950 per unit for ten. Lucid, Inc., 707 Laurel St., Menlo Park, CA 94025. (415)329-8400.

• **Mapinfo Corp.** shipped **Mapinfo v3.0 for Windows and v3.0 of the MapBasic Development Environment**. Mapinfo for Windows is priced at $1295, MapBasic for Windows is $795. Upgrades are $299 for Mapinfo and $199 for MapBasic. Version 3.0 for Mac and UNIX will ship in late summer/early fall. Mapinfo Corp., One Global View, Troy, NY 12180-8399. (518)285-6000.

• **NB Engineering** shipped **Indeo video Release 3.2**, an upgrade to Intel's enabling software-only playback technology for multimedia developers. The Indeo video driver can be downloaded from Intel's BBS at (503)645-6275 or the Intel forum on CompuServe (Go Intelforum), or can be obtained by calling 1-800-628-8686 option 131. NB Engineering, 2110 Priest Bridge Dr., Suite 1, Crofton, MD 21114. (410)721-5725.

• **Optimage** announced the availability of **Balboa 2.0**, the latest version of its collection of ready-to-use CD-I runtime libraries for C programmers. The upgrade is available for $800; the suggested retail price is $4000. Optimage, 1501 50th St., Suite 100, W. Des Moines, IA 50266. (515)225-7000.

• **Transparent Language, Inc.** released **Windows v2.0 of Transparent Language**, its foreign language learning software. The upgrade costs $34.95. Transparent Language, Inc., 22 Proctor Hill Rd., P.O. Box 575, Hollis, NH 03049. (603)465-2230.

• **Xing Technology** announced **Picture Prowler v2.0**, adding a slide show presentation, the ability to catalog removable media and to add text files, and Photo CD support. Xing Technology Corp., 1540 West Branch St., Arroyo Grande, CA 93420. (805)473-0145.

New Products

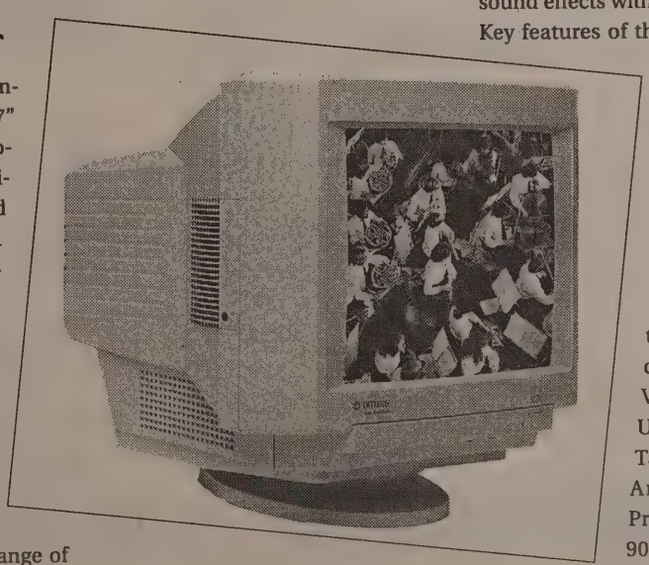
MONITORS

Daytek Energy Star Monitor

The new DT-1701M2 is both PC and Macintosh computer compatible straight from the box. This Energy Star compliant, 17" color monitor features a flat nonglare/antistatic screen, edge-to-edge display, and a 140MHz AMP bandwidth. It supports a maximum resolution of 1600 x 1280 and meets the Swedish standard for MPRII low radiation emission. ($684) Daytek Corp., 16371 Gothard St., Unit D, Huntington Beach, CA 92647. (714)375-0210.

Tatung Audio 15 Multimedia Monitor

The Audio 15 is a 15" flat-square screen multimedia monitor with built-in speakers. Its two preinstalled internal speakers located on the sides of the display provide users with a full range of sound effects without taking extra desk space. Key features of the Audio 15 include a front digital control panel and 1024 x 768 noninterlaced resolution. It is EPA Energy Star compliant and meets all environmental and industrial standards, including the Swedish standard for MPRII low radiation, and FCC Class B quality standards. The Audio 15 is compatible with VGA, Super VGA, 8514A, VESA, XGA, and Ultra VGA standards. ($499) Tatung Company of America, Inc., 2850 El Presidio St., Long Beach, CA 90810. (213)979-7055.



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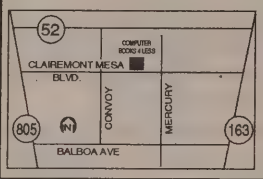

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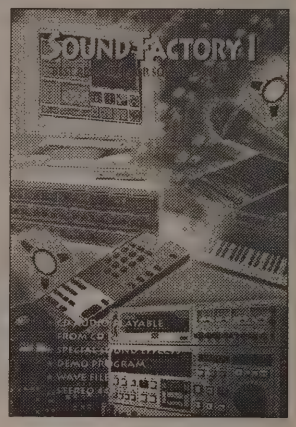
Product Spotlight

CD-ROM

Sound Factory I

The Sound Factory CD-ROM provides a new way to test the quality of Windows-based sound cards. Users can choose among audio modes that include 8-bit or 16-bit resolution; stereo or mono; and 44K, 22K, or 11K sampling rates. By experimenting with different combinations, users will become familiar with the different sound qualities available on their computer. The CD, with more than 500MB of WAV format audio files, contains thirty pieces of upbeat music and sound effects. Each clip is accompanied by a 256-color photographic image that can be reproduced royalty free. The Sound Factory CD can be used on an audio CD player as well as on a multimedia system. ($49.95) Accurate Research, Inc., 1500 Wyatt Dr., #10, Santa Clara, CA 95054. (408)748-9988.



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L.C.I.'s AltherNet device allows networking and printer sharing between two PCs or laptops via their parallel ports. All applications on one computer can be run on the other, as can one computer's hard disk be accessed by the other. With AltherNet, two PCs can share a printer under DOS without software. AltherNet's processor consumes only 4 microamps; and if there is no transfer over the network, there is no power consumption. Because it uses a parallel transfer protocol, data transfer is substantially faster (up to 3MB/min. hard disk transfer rate) and more reliable than common serial transfer methods. It can be installed like an Ethernet card under Windows for Workgroups 3.11 without opening the PC. ($69) Leunig Communications Inc., 1630 Oakland Rd., A115, San Jose, CA 95131. (408)441-6560.

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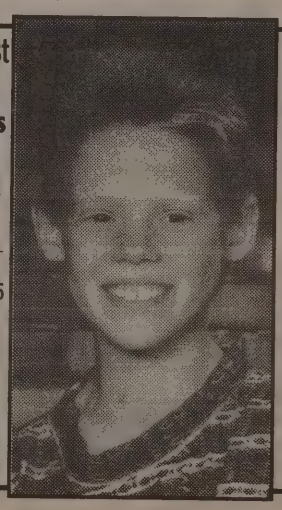

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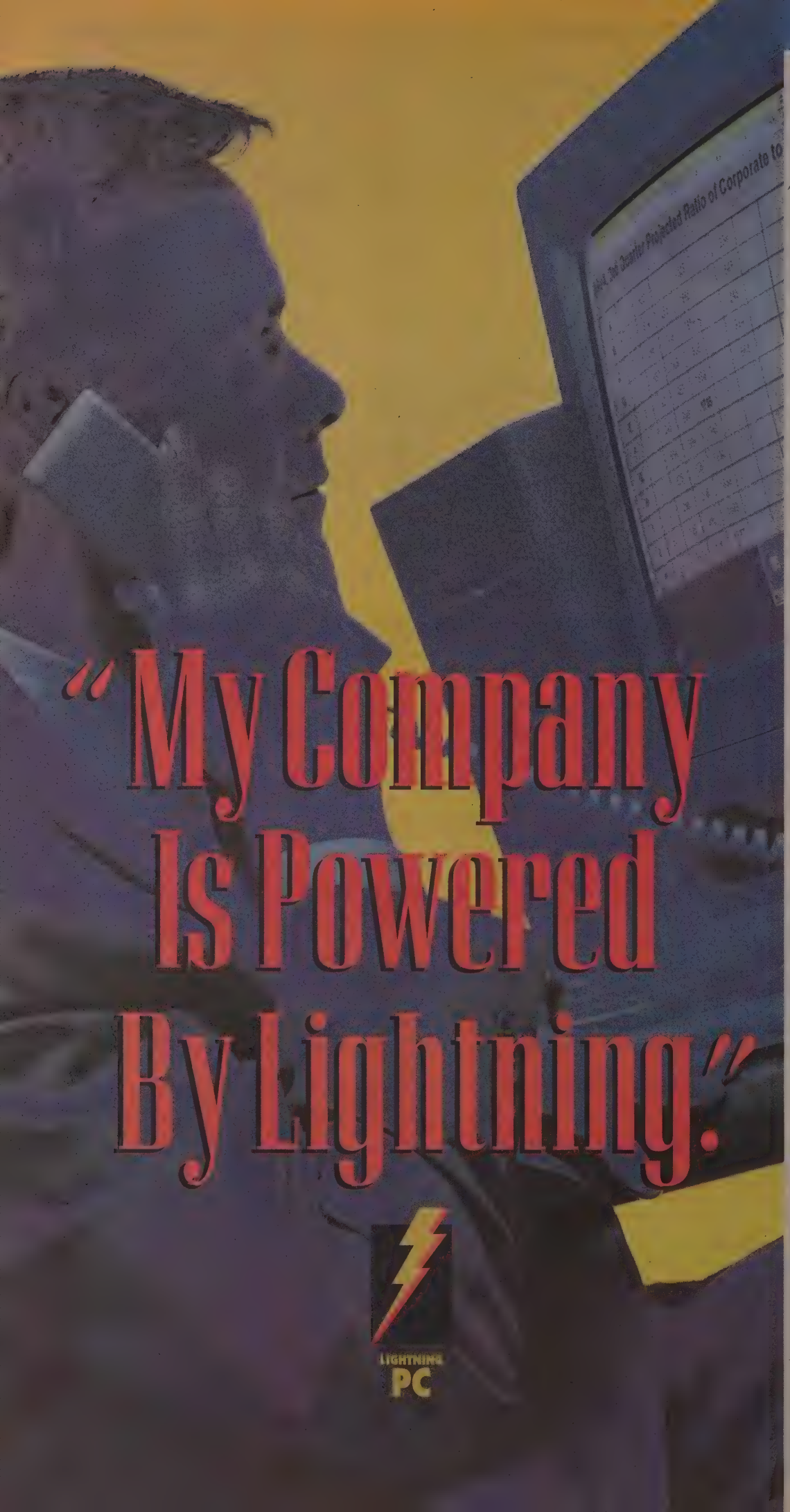

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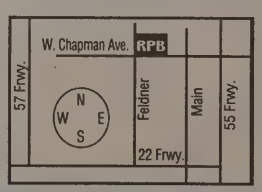

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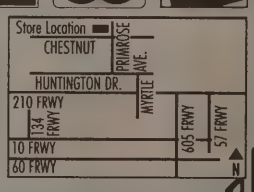

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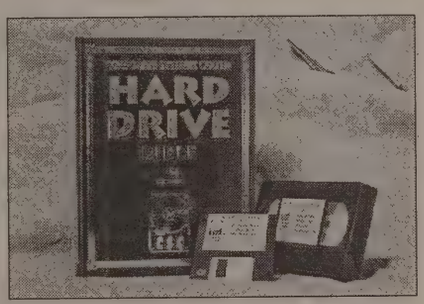
Silicom LAN Pocket Adapters

Silicom's LAN Pocket Adapters make easy connections between Token Ring or Ethernet LANs and notebook and desktop PCs. No power adapter is needed and there is one single unit for all cable. Because of their modular design, the network cable connection section may be removed and swapped with a different cable type. Each adapter comes with drivers for ODI Netware, NDIS, and IBM LAN; is fully software configurable; and supports the new E.P.P. printer ports. ($180) Available in 1994 Jensen Tools catalog, Jensen Tools, Inc., 7815 S. 46th St., Phoenix, AZ 85044. 1-800-426-1194.

Book

Hard Drive Bible, Seventh Edition

Corporate Systems Center has released the seventh edition of the *Hard Drive Bible*. Written for technicians and system integrators who install or work on data storage products, the new edition includes installation instructions, drive parameter tables, and setup information on hundreds of hard, optical, and tape drives. The information is arranged by manufacturer in easy-to-follow tables. Sections covering installation, formatting, and troubleshooting have been expanded. Jumper settings and compatibility information on controller cards and driver software have all been updated and revised. *The Hard Drive Bible* comes with a free video tape with information on how drives work and installation and troubleshooting tips. A copy of Corporate Systems Center's drive performance test software, low-level format programs, and a copy of Seagate's technical support software are also included. ($49.95) Corporate Systems Center, 1294 Hammerwood Ave., Sunnyvale, CA 94089. (408)734-DISK.



Reviews
Game Reviews

Buzz Aldrin's Race Into Space

Designed By: Fritz Bronner
Published By: Interplay
For: 286, VGA/MCGA, Microsoft mouse, Adlib/Sound Blaster/Pro-Audio/Roland/ Gravis
List Price: $34.99
Reviewed By: Fred Haslam

Race Into Space looks like a computerized version of TFG's paper game Liftoff. Many of the mechanics are the same, but this game takes good advantage of the computer's capabilities to reduce bookkeeping and emphasize the personal side of the space program. The dozens of movie clips from actual space flights makes the game very attractive and exciting.

It simulates the American/Russian race to the moon during the '60s and early '70s. As director of either program, you invest your budget in research, equipment, and astronaut training. The primary conflict is safety versus time. In order to maintain a high budget, you must perform "space spectaculars." This means performing key missions before your competitor does.

The interface is innovative. The primary screen is a picture of Cape Canaveral and all the buildings are buttons. The controls are easy to use, but you will have to consult the rules to understand what you are doing. There is little music, and sound is incidental except for the movie clips.

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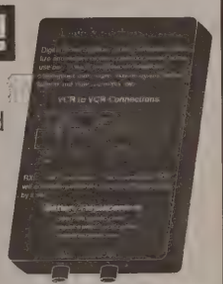

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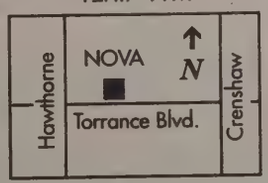

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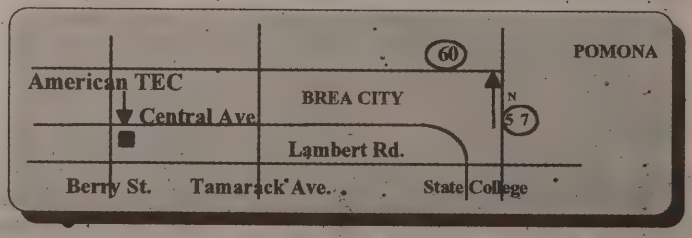

Product Spotlight

Race Into Space is a somewhat challenging strategy game. The best part is watching the movies strung together to play out your space missions. Waiting to see if things go boom or bust is both tense and exciting. (Interplay, Inc., 17922 Fitch Ave., Irvine, CA 92714. 714/553-6678)

Lower Your Score With Tom Kite—Shot Making

Published By: Intellimedia Sports
For: Windows MPC
List Price: $79.95
Reviewed By: Mark Will

Need a little help with your golf game? If so, then Intellimedia's new interactive CD-ROM golf title, Lower Your Score With Tom Kite—Shot Making, may be just the title for you. This program comes as a two-CD set narrated and demonstrated by 1992 U.S. Open Champion Tom Kite, winner of nineteen PGA tour events and the PGA's all-time leading money winner. The first disc features introductions by Tom Kite and prominent sports psychologist Dr. Bob Rotella, stroke savers, sand shots, trouble shots, special shots, and games around the green. The second disc, Ask the Pro, features audio and still slides, and consists of a question and answer format which allows you to get score-improving advice from Kite and Rotella on all aspects of the game. Also, simply by registering the product you can obtain another free CD-ROM with still more advice from Kite and Rotella on various aspects of the game. Another golf title due out later will concentrate on the full swing.

The interface to using the prod-

Continued on page 172

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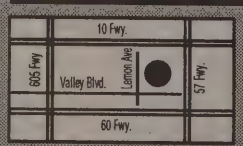

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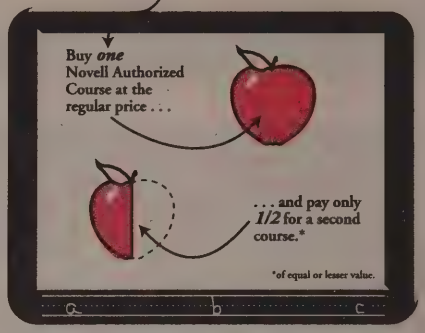

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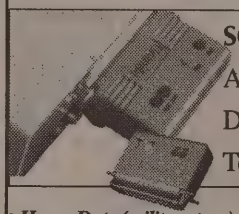

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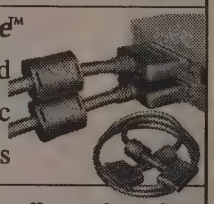

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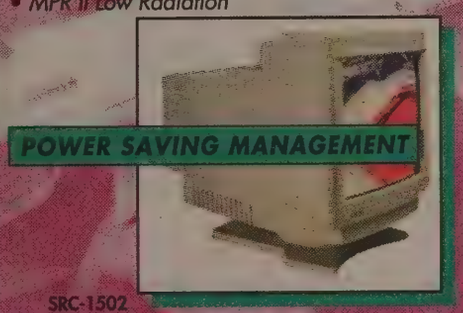

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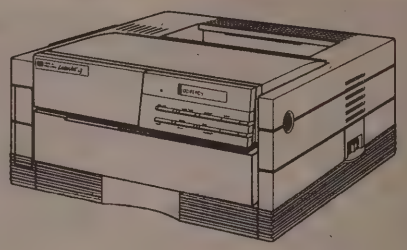

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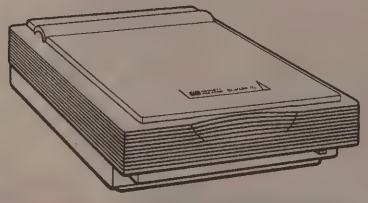

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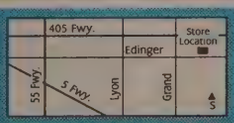

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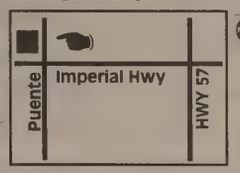

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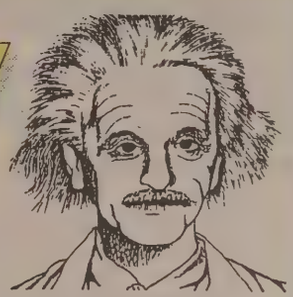

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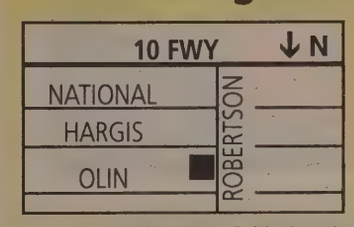

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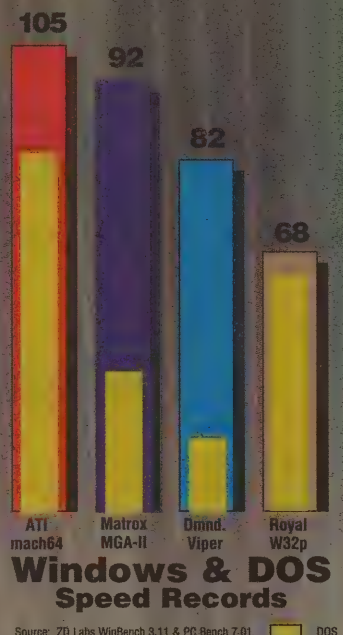

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MULTIMEDIA 101

Pop Music Meets Multimedia

Jaundiced Reflections On The Purple One, And More

Pop music has significantly influenced the cultural tenor of the times for at least the past forty years or so, and it's an open question whether multimedia has any hope of such influence—although that is, of course, exactly the aspiration of so many. Music is by its very nature interactive—even the mere consumption of pop music has significant communal interactive aspects—but it is likewise also linear. Music is almost certainly the oldest art form; it's done just fine for many years and is continually evolving in different directions.

By what hubris does the digital revolution hope to improve upon it? In fact, music is what may improve the digital revolution.

Pop music is already substantially a digital medium, operates in a multimedia manner, and is so far ahead of the computer world in both interactive and media terms that the subject is laughably ironic.

The essence of a pop-music experience is that it's short, it's repeatable, it's pleasantly ephemeral, and it's broadcastable. In the music world, there's a great deal of redundancy; in other words, a "hit" is supported by thousands of also-rans; this, along with the ephemerality, constantly allows new contenders to emerge (similar to the computer world, but much faster!).

What we're looking for in musical multimedia is something that's short and repeatable, that can be broadcast or otherwise enjoyed by large audiences simultaneously and basically passively—and is enjoyed by large audiences, a claim the computer multimedia world would currently have difficulty substantiating for even its most successful products.

This mythical multimedia product would also have additional layers of interactivity that a user/consumer could enjoy either alone, with friends in a physically close situation, or remotely with friends via modem. What those additional layers look like or sound like is, of course, the big question. But equally importantly, it wouldn't be a matter of compiling the finite histories of old rock stars with a catalog; it would be fresh, and there'd be lots of it—every week!

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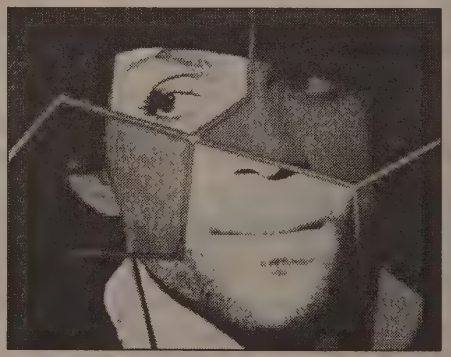
My puzzling over these issues has a long history but recently received intense stimulus from the Prince (or whatever it is that he wants to be called) Interactive CD-ROM and the general drift of the Music & Multimedia U94 event, which did not convince me that there's much compelling stuff in the coming pre-Christmas wave of product.

As I wrote in this column in *MicroTimes* #124 a couple of months ago, there are apparently tons of coffee-table multimedia, collections of sound and video stuck together on a CD-ROM. That doesn't prevent a gushing downpour of hype about how we can "interact blah blah blah creatively" with the artist. All told, it was rather a dismal outlook, looking backwards at history rather than forward to new conceptual expressions from new artists.



CLICH HERE FOR PRINCE INTERACTIVE

Prince Interactive is a perfect example of the hype far outstripping the delivery.

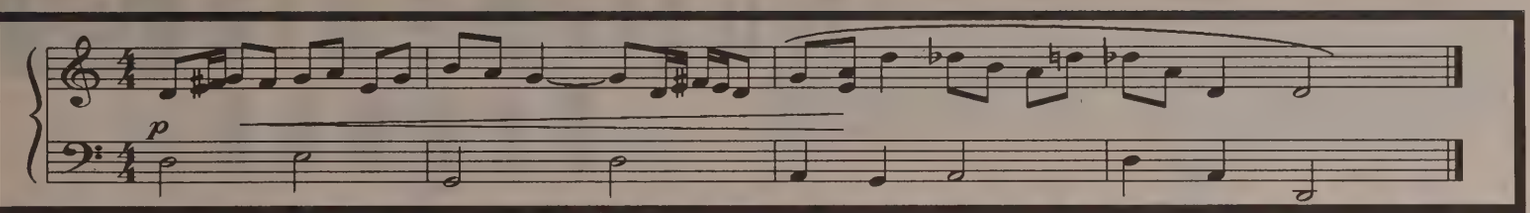
Let's be nice for as long as possible: the music and videos are fine, being mostly a collection of his old tunes along with a few new numbers that, while not among his classic work, aren't too shabby. But the presentation *is* shabby, being a sort of cheap version of Purple Myst Xplora (and it's strange how work on Interactive began as work on those two projects was winding down). What you get to do is to click around what purports to be Prince's fantasy playground for the New Power Generation, discovering rooms, morphing objects, scantily clad females, a recording studio, a nightclub, a library, his boudoir, etc., etc. It's tedious beyond belief. It's pretentious beyond being a joke. The very few moments of amusement are far outweighed by the torture of finding them.

The fundamental problem is that the spatial metaphor only works when it's done extremely well, as in Myst. In Interactive, it gets in the way. Don't tell me it's "play" to mouse around when it's such a drag—I want instant access to the good stuff, as I have with a turntable or audio CD player. Furthermore, don't tell me I'm interacting with the artist when all I get is a choice of which song to listen to or extremely limited options in sound manipulation—four-track mixers to make my own version of a song are a joke, and a karaoke version of a song can be found on most any 12-inch single.

A product like Interactive attempts to channel your experience and restrict your options by imposing a limiting structure. This is an innate part of traditional artistic expression, and I have no problem with it in traditional settings without the Orwellian hype. But in this new setting, I expect my options to be at least as good as they are with traditional media. Interactive offers little worthwhile that I can't get with a DJ rig, a regular CD player, and a video deck. Interactive doesn't even capitalize on its digital nature by telling you that you can interact with its files by using original applications such as Premiere to open them. Ultimately, Interactive is a signpost to a dead-end street.

CLICH HERE FOR HOPE

Sunk in despair and aggravation that perhaps I was doomed to an endless diet of hype and unfulfilled expectations, I called Nancie S. Martin, president of Jouissance Productions, for a reality check. I looked to her as an expert in the field with her extensive background in music and magazines. Besides authoring four books on pop music, she's had stints as the editor-in-chief of both the teeny-bopper-oriented *Tiger Beat* and the somewhat more adult *Playgirl*. Since then she's ventured into the multimedia field as the project manager for Brilliant Media on Peter Gabriel's Xplora 1 CD-ROM. Martin's current projects are a pair of CD-ROMs for Compton's and Rhino Records on Atlantic's soul and rock music of the '60s.



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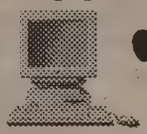

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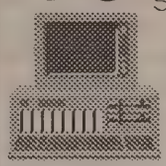

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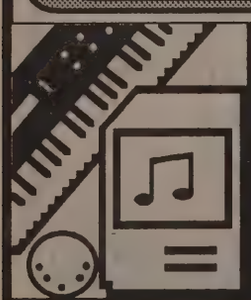

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Martin is refreshingly free of hype and does not make grandiose claims for these CD-ROMs, which are basically Red Book audio collections of some of the classic tunes of the era, along with expanded liner notes on a Mac/MPC hybrid data track. These expanded liner notes include the multimedia elements of video clips and an 8-bit version of the complete song as well as substantial text about the artists with a history, a discography, and fun facts. It's not the future, and thankfully there's no spatial metaphor to wander around in. There's a common navigational scheme for all the songs, allowing you to access the various features. Each song has its own graphic design by an individual artist, interpreting the mood of the song, but it's equally important that the designs invite you in to read the background information.

Martin is a great believer in the value of text, saying, "I'd like to see more text incorporated into interactive product because I think that it's important to keep people reading. I think that the act of reading, the symbolic processing, is something that you can't do any other way." Jouissance's office even has a reference copy of Roland Barthes' *The Pleasure of Text*, and particular attention is being paid to the way text is handled in these CD-ROMs with the layout being done in QuarkXPress. However, Martin jokingly refers to them as "the party CD-ROMs you can dance to."

We had a wide-ranging conversation on what might be the future of music as regards interactive multimedia. Her point of view is that it might be a long time before a significant new cultural direction develops. Martin agrees with the perception that music is already successfully interactive: "All of us can feel music. Music is interactive; it has been since cave men were drumming around the fire. We love to dance to it. We like to turn it up. We like to drive while music is playing. Music is a soundtrack, but music is also something you can be a part of, like music for slam dancing, music for moshing, music for whatever it is. Music for ballroom dancing, for that matter. In that

You get to click around what purports to be Prince's fantasy playground for the New Power Generation, discovering rooms, morphing objects, scantily clad females, a recording studio, a nightclub, a library, his boudoir, etc., etc. It's tedious beyond belief.

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way it's interactive because we feel it and we have a reaction, we do stuff to it."

She puts her finger on the issue that arises again and again in discussion: "But we don't always know how to translate that. Somebody who's a fine ballroom dancer can translate their appreciation of the music into steps and can make that look beautiful—but we can't all do that." This is the problem Todd Rundgren is referring to when he talks about "the bogus myth of instant creativity." However, Martin can see a role for an intermediary: "I think that what talented visual artists can do, what multimedia artists, for want of a better term, can do, is to translate the experience of music, is to be interpreters. What you as the user get the benefit of is of both experiencing the music yourself and also seeing someone else's interpretation of it."

In these early days, Martin emphasizes that "artists need good collaborators in just the same way that they found video directors that understand the medium and can work with it. They wouldn't consider going to the recording studio without a recording engineer. Why would they consider going into a multimedia studio and not having somebody to work with them?"

However, she also believes that "if an artist is going to participate in the creation of an original CD-ROM, then he or she is going to have to learn what this medium can do in the same way they've learned what they can do in the recording studio, in the same way as people in the last ten or fifteen years have learned what they can do in the video suite. Some people have very consciously avoided learning what they can do with videos. In consequence their videos are pretty much a camera and some guys playing, and there's some girl in lingerie. They haven't really put themselves out there. But the artists who have—Peter Gabriel or R.E.M.—who've said, 'I want to learn what I can do with this,' their videos are pretty damn good. They've applied themselves and they've done good things with it and I think the same thing will happen with multimedia."

Which almost brings us back to Jon Carroll's remark about the diminished importance of rebellion and the elevation of imagination. Let's just say that there's still plenty of imagination needed for the replacement of the music industry with a digital form of interactivity. Click here to start. ■

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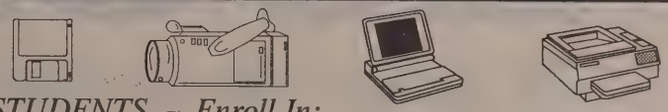

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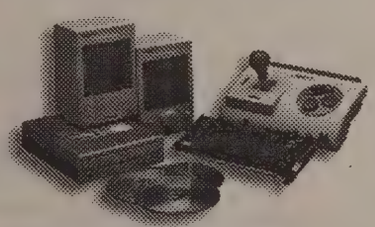

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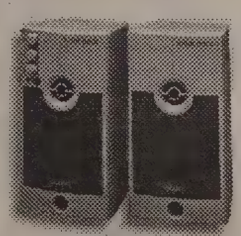

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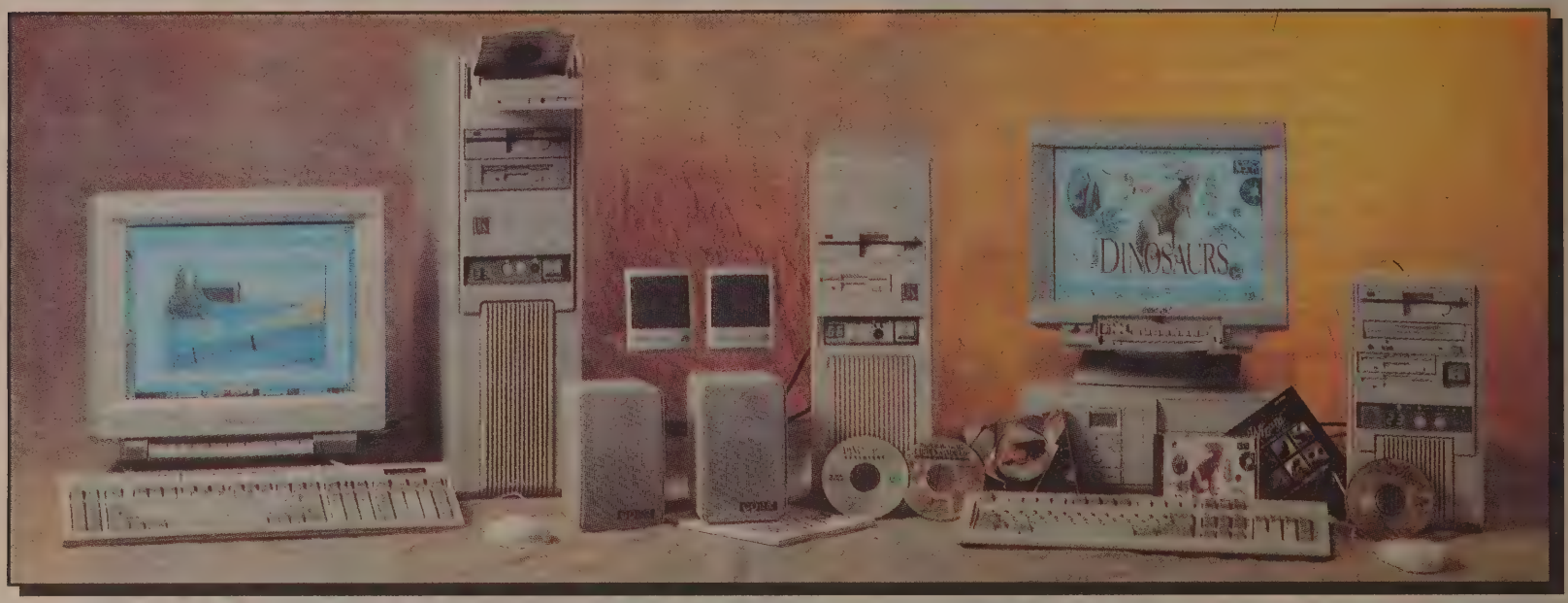

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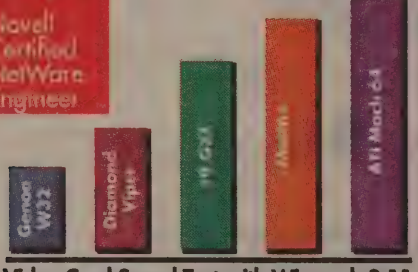

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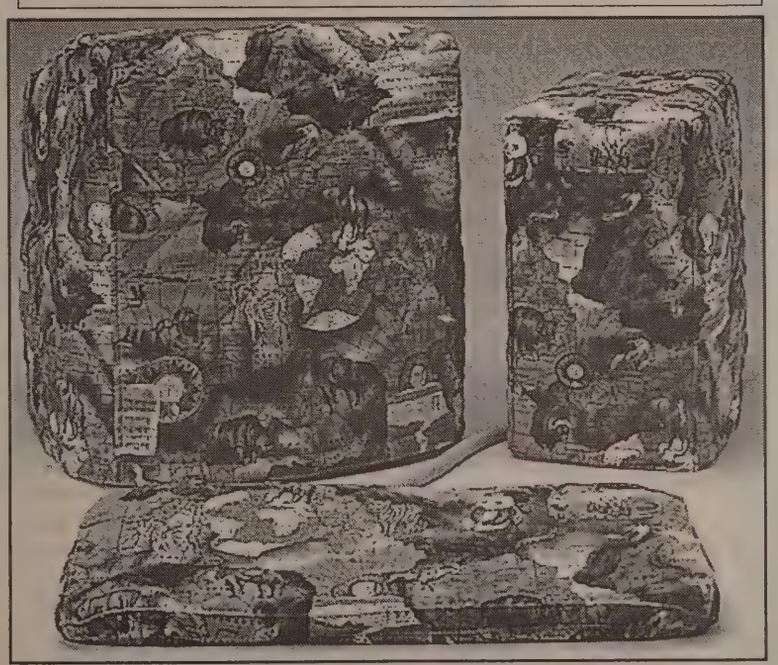

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Amiga VideoStage Pro:

Oxxi's New Multimedia Presentation Tool

Oxxi has released a powerful new multimedia authoring program called VideoStage Pro. Thanks to its impressive text animation capabilities, it's also an amazing video titling tool when used with a genlock. There is built-in control for ECS chipset genlocks, GVP's G-Lock, and Digital Creations' SuperGen.

CREATING AND MANIPULATING SLIDES

The main screen holds the "Storyboard" that displays thumbnail representations of fifteen "slides." A scrollbar lets you scan through longer "shows." A small icon indicates the transition used for each slide as well as timing information. Timing can be set in increments of one video field (one-sixtieth of a second for NTSC). You can select transitions from a user-definable tray, or use the available requester to select from the full assortment of over sixty wipes, fades, and scrolls. Each slide also has a user-definable name. Two separate shows can be in memory simultaneously.

The slide creation buttons are arranged vertically on the right side of the screen. You can drag one onto the Storyboard to replace an existing slide or insert it into the show; if you just click and release, the slide goes to the end of the sequence. Slides can be quickly moved or copied using the mouse. The "gallery" provides a handy temporary parking place for one or more slides.

There are several types of slide. One is a blank black slide; another is a color bar image for adjusting color. A slide can also represent an ARexx script or an audio event (8SVX samples and tracker mod files are supported).

The graphic slide is the one you'll use most often. Graphic slides are comprised of two parts: the background; and text, graphics, etc. placed on top of it. VSP comes with several background images designed to provide nondistracting backdrops for text. Alternatively, a small IFF brush pattern can be loaded and automatically tiled to fill the screen. A number of premade patterns are supplied, and you can create your own with any paint program. ProFills by JEK is a good commercial source for more patterns.

VSP can also generate customizable gradient backgrounds. These are not only beautiful, but they also require virtually no storage space, which could be important if you will be distributing the show on floppy disk.

Animations (ANIM5 format only) are also loaded into graphic slides. Total control over speed, looping, and time is featured. (Note: VSP expects anims to be looping.)

VSP divides color palettes into "fixed" and "assignable" ranges. Fixed colors are adjustable by the user for text and object coloring, including outline and shadows. Assignable colors are dynamically allocated by the program and used for backgrounds, gradients, brushes, antialiasing, etc. Generally, VSP automatically sets up half the palette as fixed, up to thirty-two fixed colors, but you can change this manually. The depth (which determines the number of colors), screen mode, and resolution for each slide are adjustable.

There are two ways to load a graphic: as a "picture" or a "pattern." (As we'll see later, the term "pattern" is somewhat of a misnomer.) When you load a graphic as a picture, the slide assumes the graphic's screen mode, resolution, and depth, and the entire palette becomes fixed.

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This isn't a problem unless you're going to add titling; normally, a graphic's color palette won't contain the contrasting colors needed to make text stand out. If you're going to use titling, you'll have to do some color palette manipulations beforehand. Besides, VSP won't have any assignable colors for antialiasing, etc. (There is an exception if the loaded graphic uses fewer than the maximum possible bitplanes—eight for AGA, four for non-AGA. In this case, one bitplane is added and you may or may not end up with assignable colors.)

There is, of course, an easier way to maintain assignable colors. The trick is to load as a "pattern," a background picture that uses fewer than the number of assignable colors. For example, with a sixteen-color slide (eight fixed and eight assignable), you can load a four-color background. Loading an eight-color background would cause all sixteen colors to become fixed. The pattern tiling feature is irrelevant if the loaded background has the same resolution (i.e., height and width) as the slide.

The built-in palette editor features 24-bit RGB sliders, spread, copy, and switch functions, with the ability to load and save palette files. Palette colors can optionally be selected from a 24-bit color spectrum—even on non-AGA Amigas! (Actual displayed colors will be limited by hardware, however.)

Scala backgrounds, which are sixteen-color HiRes files, can be easily reduced to eight colors using ADPro or DPaint, since the images actually use eight colors at most. These work well if you manually set the fixed color bitplanes to two (i.e., four colors). Incidentally, outstanding backgrounds can be made using as little as four colors!

For titling, VSP can use any Amiga bitmapped or CG font, including color fonts. Large fonts work best for presentations and several are included with the program. Adding text to a slide is as easy as typing it on a page. Text can use gradient fills and be styled with bold, italic, underline, outline, and drop and cast shadows. Each line can be automatically justified and multilevel antialiasing is available. Also, outline width, line spacing, kerning, and shadow attributes are all adjustable.

An ASCII file can be imported with the ability to control fonts, etc. using special embedded commands. This is great for scrolling credits.

You can also add IFF brushes to a slide. If a color used in a brush doesn't already exist in the assignable

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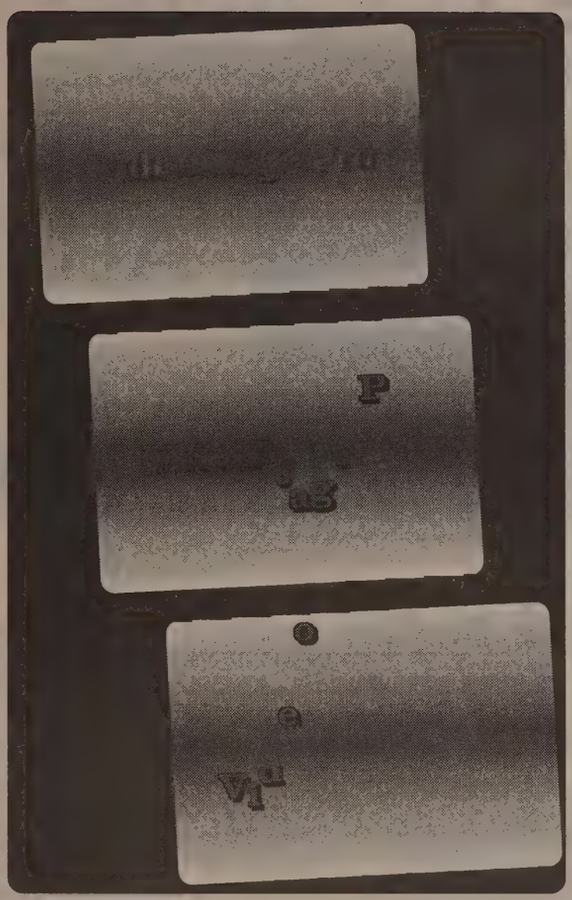
palette, VSP will attempt to load that color into an unused assignable spot. Excess colors will use the closest available color in the palette. Also, a library of twenty brushes can be set up for quick access to frequently used brushes. Warning: If a brush uses a fixed color and you change that color, VSP may select a different fixed color later on.

OBJECTS

VSP also features nine different objects like hearts, stars, boxes, ellipses, and arrows that can be added to a slide. These can be rotated, resized, and distorted at will. Multilevel antialiasing minimizes jaggies. Attribute control is similar to text, but objects can also be embossed, and color and shadows have a transparency setting.

Interactive buttons can be easily placed on a screen. A button can be a rectangle, brush, and/or text. Buttons can trigger ARexx scripts, sound, and transfer control to another slide.

Text, brushes, and objects can be positioned by hand or using several automated tools. The ordering of these items can also be set, which can affect the sequence of their appearance.



ACTORS

Lines of text, brushes, and objects can be animated onto a page as "actors." You can also group things together so they are treated as a single actor. All of the common "fly in" effects are included, but VSP features some interesting "overshoot" effects, where actors move past the intended stop point and then return as if they were connected to a rubber band. This really gives actors a life of their own—you'll probably be really tempted to overuse this in your work.

Another unique feature is the "piecemeal" option, which makes a text-actor fly in one letter at a time. Normally, this would make the effect take too long, so you also have the ability to overlap the animated pieces, adjusted from one piece at a time to the entire actor at once. Using the piecemeal option with an overshoot effect is very cool!

An alternative to piecemeal is the grid option. Actors are internally divided into a user-defined grid of rows and columns. Actors then fly in as pieces. Another option lets piecemeal and grid pieces appear to grow as they fly in!

After you preview a slide with actors, a replay screen appears that lets you review the animation with total control. You can step through it frame by frame, replay it, etc. You then can return to the actor screen and adjust effects, timing, delays, etc. This is an incredible help in getting a slide to play exactly right.

TITLING

A titling slide is essentially a graphic slide with a solid background using color 0. It's designed to hold text and objects that will be overlaid on top of video using a genlock.

Titling can also scroll over the preceding slide, if both slides have the same depth. They should also use the same screen mode, although they don't have to have the same resolution. An additional constraint is that the total depth of both slides cannot exceed the maximum for your Amiga—an AGA machine can have two four-bitplane slides and a non-AGA is limited to two two-bitplane slides. (I was unable to get this to work on my A3000, but it worked fine on my A4000. Oxxi has been alerted to the problem.)

FLOW CONTROL

Generally, slides are executed in linear fashion; however, playback control icons provide a way to direct the flow of a show. Also, there is a handy feature that lets you set the timing of slides by clicking the mouse as you play a show. This is great for syncing a show to music.

A timeline is also available to graphically adjust time parameters for slides and rearrange the play order. Since different types of slides may run in parallel (e.g., graphics and music), there are separate tracks for each type. Zooming capabilities are provided for precise editing. Most of the editing functions available on the Storyboard can be used here.

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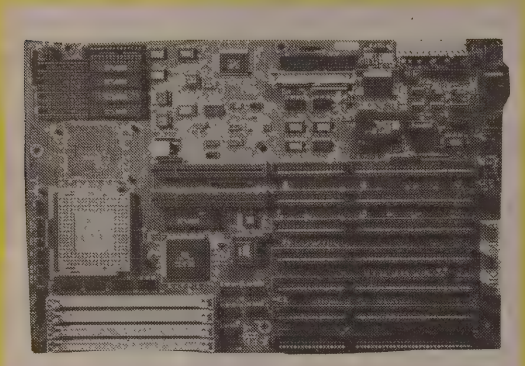

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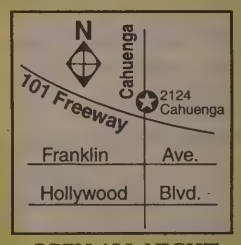

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Overhead time requirements are also shown for file loading time, object movement preparation, etc.

MORE GOOD TOOLS

VSP includes many helpful features, like context-sensitive online help. The animated transitions examples are invaluable. The custom file requester displays useful information on graphics and audio files and has the ability to preview them. VSP will also let you know when colors are being used that are too "hot" for video.

To create portable presentations, the show file and all subordinate files, including fonts, can be saved in one location like on a floppy disk.

VSP VS. SCALA

For anyone who does Amiga presentations, the first question on your mind is probably how VSP compares to Scala MM300.

Overall, I'd say Scala is a much more refined product; it has a more powerful ARexx implementation, cleaner page transitions when pushing hardware limitations, the ability to play anims from disk, support for more anim formats, a more straightforward interface, more built-in control of external devices, and text wipe-off effects—to name just a few advantages. (Of course, many of VSP's features, as described above, don't exist in Scala either.)

Scala is hampered by a joystick-port dongle, which even the player utility program requires. If you're developing a presentation on one machine to be played on another, the dongle can quickly become a real pain. VSP, on the other hand, has no copy protection and the player program is freely distributable. VSP is also less than half the price of Scala.

WISH LIST

There are a few things I'd like to see in VSP, like automatic text wrapping, actor wipe-offs, and animbrush support. Another shortcoming is you can't automatically back up through a show using the mouse without creating specific hot buttons. This is a vital feature for live presentations.

I'd also like to see text, brushes, and objects with the same features and capabilities. I want to be able to add an outline and shadow to a brush, as can be done with text; I'd like the ability to make text shadows partially transparent, as objects can be; etc., etc. I'm sure things like this will be addressed in future releases.

Kudos to programmer Gary Bonham on a superb initial release. Oxxi has a real winner on its hands. The power-to-price ratio is extraordinary.

The program requires a hard disk, 1MB Chip and 2MB of Fast RAM, and AmigaDOS 2.0 or greater. Look for an upcoming version called VSP+, which will include remote updating and scheduling capabilities (a la Scala InfoChannel, $2500), encapsulated PostScript support, and more. ■

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CORRECTION:

Last month's story on Jim Carey indicated the television show was called *Where in the World Is Carmen Sandiego?* This should have been *Where on Earth Is Carmen Sandiego?* Sorry, my fault. *–DN*

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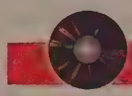

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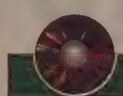

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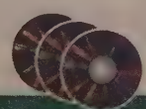

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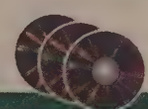

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3D Studio Plug-Ins

Separating Autodesk 3D Studio From The Competition, Ipas Technology Provides Unlimited Possibilities Through Customization

Autodesk's introduction of its Plug-In Toolkit for 3D Studio, a professional modeling and animation software package for the PC, has created much excitement. This IPAS Toolkit underscores the reasons for the current industry shift towards modular, expandable, open-software systems. Gary Yost, lead developer on Autodesk 3D Studio expressed this when he said, "The 3D Studio Plug-In Toolkit really represents a tremendous opportunity for imaginative independent application developers. With an installed base of almost thirty-thousand, the 3D Studio user community is now big enough that building even a single 3D Studio plug-in effect can make sense commercially."

WHAT IS IPAS?

The IPAS technology and interface is a system that lets you customize 3D Studio by calling in separate mini-programs, or plug-in modules (written in the C programming language), to create special effects in your animations. With the Plug-In Toolkit, 3D Studio developers can create IPAS special effects modules for their own in-house, proprietary uses or for commercial resale to other 3D Studio users. (See sidebar for acronym breakdown.)

EXAMPLES: PARTICLE SYSTEMS

Suppose you want to have a scene in your animation where it is raining. Rain is not a simple effect to recreate—it involves calculating physical properties such as drop sizes, amount of rainfall in a given area, the speed at which it falls, amount of splashing on impact, etc. Clearly, this will take a while to figure out. If you are on a tight schedule, the quickest solution is to buy the .AXP IPAS routine called Rain (available through Yost Group, Inc.). Plug it in, set the parameters, and render the scene. You will have precisely the kind of rain you want, from a drizzle to a downpour.

Maybe you would like to put bubbles in your animation to make champagne, or following a scuba

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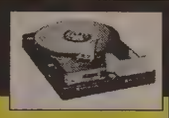

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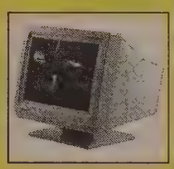

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diver or just a room full of bubbles? Digimation has an .AXP IPAS routine called, naturally, Bubbles. After loading it in you set the quantity of bubbles you want in the scene. (You can choose up to fifteen hundred!) You would then determine their size, their shape, where they will start and stop, and the rate of speed at which they will travel. If you were to try to create this scene just using the Keyframer in 3D Studio it would be quite a task.

SIDEBAR

IPAS is an acronym that originated in Release 2 of Autodesk's 3D Studio. It was derived from using the first letters of the original four types of external processes that were developed:

I for image processing (file extension .IXP)
P for procedural modeling (file extension .PXP)
A for animated stand-in (file extension .AXP)
S for solid pattern (file extension .SXP)

With 3D Studio Release 3, two other types have been added:

.kxp, for keyframe procedures, and
.bxp, for handling bitmap processes.

Would you like to apply the look of a Van Gogh or the thick heavy strokes of an oil painting to an animation? How about adding grain, scratches, and wobble making it look as if it were an old film playing on a projector! Lately, you see this type of nostalgic effect used on TV on everything from retro music videos, to Cadillac and travel commercials. The travel series for Mazatlan shows, in black-and-white film, a fishing boat on the ocean (complete with scratches and lint flying by). The scene turns gradually to color, showing that Mazatlan's present beauty and tranquillity is the same as it was a hundred years ago. Pyros Partnership, a well-established special effects studio, is now making this IPAS routine called Oldmovie available, as well as many others.

.KXPs are a very exciting new type of IPAS routine that allow for dynamic simulations such as collision detection between objects, gravity, and wind forces. They also offer import/export capabilities for motion-control systems such as Schreiber's Puppeteer. Motion control is the ability to put sensors on a person and monitor their movement, then collect this data so that it can be applied to an animated mesh object or person to produce the lifelike motion of the real person.

Bones (from Digimation) is a very important new IPAS routine that is a spline-based skeletal deformation package. You can, for example, create backbones that bend and twist the object they are in, as if it were an internal wire armature, like Gumby. Because they are organic in nature, splines offer an added sense of realism to moving or animated objects. They work particularly well as the underlying structure of rendered people and creatures, or anything that needs to look alive.

OTHER EXTERNAL PRODUCTS

.3DS (3D Studio) or .PRJ (project) files are 3D Studio native file formats. They are not IPAS routines, but can be developed by third-party vendors also for use in 3D Studio. They can be straight mesh object files or can contain information that makes the animator's job easier. Chris Thomas of The Schrieber Institute says, "A lot of mesh models that you purchase must be mapped with materials and also have mapping coordinates applied, which is time-consuming. The Schrieber Productivity Pack and Imagine meshes come ready with these done for you, and therefore, they look as photorealistic as possible. All you have to do is render them."

IPAS routines are the way in which 3D Studio can be infinitely enhanced and extended to meet each user's own particular animation, modeling, and rendering needs.

TALK ABOUT FUN!

An often difficult process in animation is making characters speak and lip-synching the speech with a soundtrack. Imagine Oscar Talks is a .PRJ file that is, in essence, a 3-D talking human head. His head can be put on the Imagine Humans Male mesh body and then made to talk. Oscar is used often as a narrator in architectural walkthroughs and training, documentary, and educational films. He consists of frames that are based on phonetic lip positions for easy sequencing of speech. First, plan the script, then time the movements, and voila, you have someone on your screen looking and talking back at you!

Many computer animation needs are specialized or unique to each project, and don't come as part of a commercial package. IPAS technology separates 3D Studio from the competition by going beyond offering a limited, fixed set of features within their software package; they provide unlimited possibilities through customization. 3D Studio, by itself, is just the starting point. IPAS routines are the way in which 3D Studio can be infinitely enhanced and extended to meet each user's own particular animation, modeling, and rendering needs. Putting development tools into the hands of the established 3D Studio user community creates a type of synergism and new ideas that surpass any one company's marketing and development resources—even a company as successful as Autodesk.

Autodesk 3D Studio is used by video post-production specialists, entertainment and special effects software developers, and animators.

3D Studio Release 3 comes bundled with twenty-six IPAS routines and many others are available through third-party developers and vendors. There are currently 150 IPAS routines available (often in sets of five or six related effects), and it is expected that by year's end there will be over two thousand IPAS routines available through third-party vendors. ■

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RESOURCES:

Autodesk Plug-In Developer's Toolkit , $249
Autodesk 3D Studio, $2995
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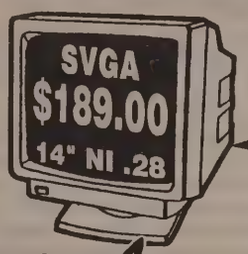

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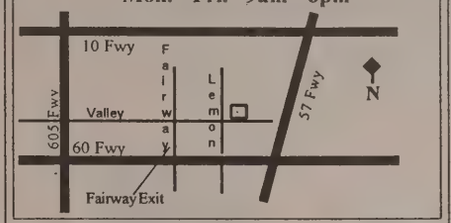

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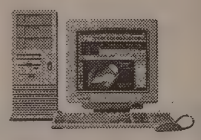
17" Monitor Add $300

P5-60/66MHz Pentium Computer



- Mid Tower w/230W UL PS
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- 101 Enhanced Keyboard
- 3 Button Serial Mouse
- 15" 1280 x 1024 NI .28 DPI Monitor

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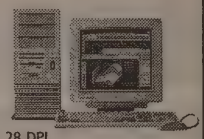

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- 8MB RAM
- PCI SVGA Card with 2MB Memory
- 101 Enhanced Keyboard
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- PCI IDE Controller
- 2 Serial, 1 Parallel Port
- 3 Button Serial Mouse

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17" Monitor Add $300

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- 4MB RAM
- 32 Bit VLB Video Accelerator w/1MB
- 101 Enhanced Keyboard
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- 2 Serial, 1 Parallel, 1 Game Port
- 14.4 Fax Modem, Internal
- 3 Button Serial Mouse
- 101 Enhanced Keyboard

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- Sound Blaster 16 Creative Labs
- 14 CD Titles
- 2 Multimedia Speakers

$300

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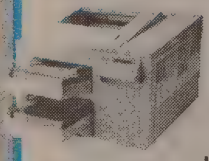

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Laser Printers

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HP 4+	1375
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HP 4ML	1035
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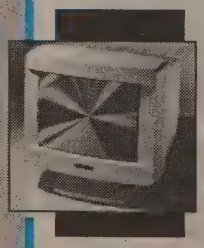

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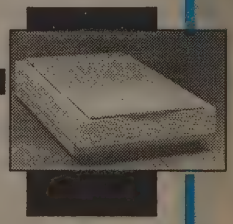

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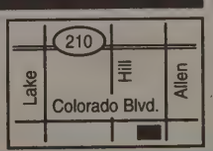

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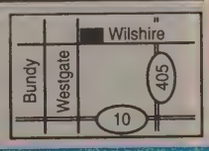

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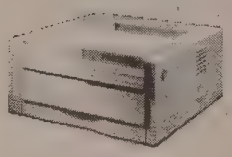
HP LASERJET 4P LASER PRINTER



The HP LaserJet 4P Printer features true 600 x 600 dpi printing. That's four times the resolution of conventional 300 dpi printers! Plus, this compact printer comes with 45 built-in scalable typefaces, enhanced HP PCL5 for seamless compatibility with the HP LaserJet 4 printer, and 2 MB of standard memory (expandable to 26MB). For a powerful printing solution that doesn't take up a lot of space, the HP LaserJet 4P is the smartest choice on the market!

For the PC

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Built specifically with the networked environment in mind, this printer is the perfect solution for the office that needs a reliable workhorse that everyone can share easily. The HP LaserJet 4si laser printer features a printing resolution of 600 dpi at speeds up to 17 pages-per-minute! The only thing more impressive than it's features is it's affordable price!

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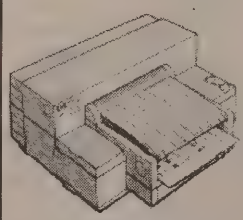

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For Macintosh and PC

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BLOWOUT!

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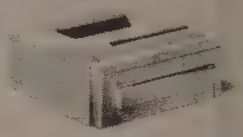

Limited resources? Limited space? The HP LaserJet 4L is the perfect answer! This 300 dpi laser printer is HP's lowesr priced LaserJet ever. In addition to it's sharp looking output, the LaserJet 4L has an incredibly small 14" by 14.5" footprint; the perfect fit for your desk or shelf. Plus, it comes equipped with 26 built-in scalable fonts for professional quality documents. When it comes to value for your dollars, the HP LaserJet 4L can't be beat!

For the PC

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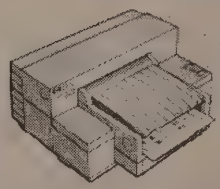

Using an advanced color printing system with HP's exclusive built-in ColorSmart technology, the new DeskJet / DeskWriter 560C delivers optimal color output. Also features resident dual cartridges for convenient black-and-color printing at the same time, clear 600 x 300 dpi black printing, and a variety of internal and scalable fonts!

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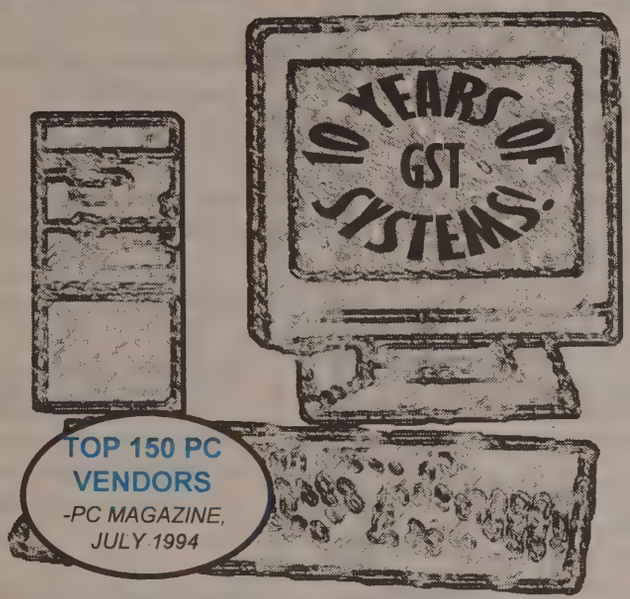

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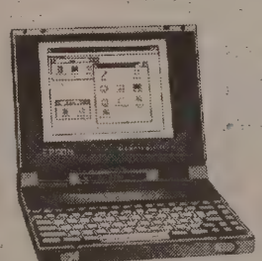

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CENSORSHIP

continued from page 94

to create a Unitarian newsgroup. The process is open, so it's perfectly possible for people who don't want that newsgroup to appear to vote against it, or to encourage other people to vote against it. While some might find that troubling, I don't find it disturbing at all. It's democracy, and it's meant to be a democratic process.

But democracy on the net has an entirely different legal status from in the USA.

Well, so?

There's a philosophical versus a legal setting, and I think the reader who's new to this needs to know the distinction.

I think that in the common sense of democracy, which is people voting for what they want, it's democratic.

So who gets to decide what you see on the net?

As a practical matter, anyone can decide. It's a measure of the robustness of Usenet, that everyone has the capability, potentially, of forging cancellation messages, but few people do. I think everyone recognizes at some level that if they abuse that power, Usenet's value would vanish, and nobody wants to do that.

A lot of people get bent out of shape about "censorship" over things like the AOL user agreement saying you can't use swear words, or Prodigy pre-screening responses.

I have two thoughts about that. The first is that I fully support the right of any private or commercial service to set the terms of how they want users to interact on that service. I think that much of the value of an online service is in its character, and the providers should have a lot of autonomy in determining the character of the service. If Prodigy wants to be the Disney Channel of online services, there may well be a market for that kind of service, and I believe that they have a right to try and reach that market, and to ensure that they have the kind of character they want through user agreements and through software that screens out profanity, and so on.

But at the same time I think that what people find very liberating about this medium is the fact that people can speak freely, without having any kind of intermediate editor changing their words. I think that's what individual users tend to want from this medium, and I think that in the long run the services that turn out to be the most robust are the ones that allow the greatest amount of freedom to their users.

I think that the secret to the WELL's success is the fact that people feel very free to speak there. It's not always comfortable being on the WELL, but it is the case that the users there don't run to management normally to shut other people up. They handle speech on its own terms.

I think that's admirable, and I think that other people should try to duplicate the WELL's success in that area.

I think it's very important that in the face of a lot of uncertainty about what the law allows, system operators remain courageous in allowing a lot of freedom of speech and freedom of expression on their systems. When people are unclear about what might be punished, the temptation is to shut your system down, or to engage in a more active censorship role. I think it's very sad when that happens.

The First Amendment and the principles that underlie it, of freedom of speech, freedom of expression, are only meaningful if people choose to exercise those rights. Choosing to exercise those rights means sometimes that you do create some risks for yourself, but I hope system operators are willing to accept those risks. A free society really depends on the bravery of people and their willingness to assert their rights. ■

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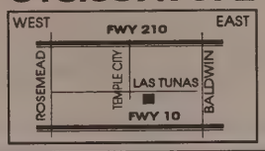

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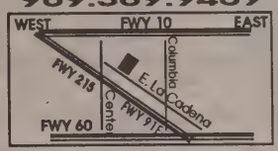

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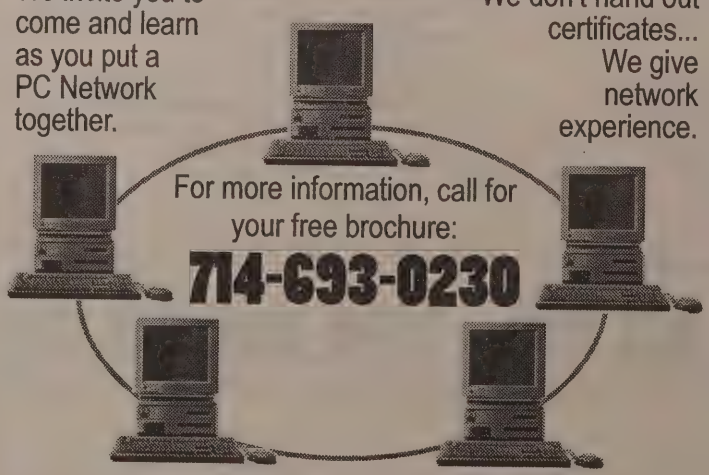
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Community Standards And Amateur Action: Not As Simple As It Seems

By Paul Hoffman

The prosecution of the Amateur Action BBS in a jurisdiction halfway across the country from its Milpitas headquarters brings up many interesting legal questions. However, the online community may have been too quick to make the sysops, Robert and Carleen Thomas, the poster children for the First Amendment.

The Thomases' lawyer, Richard Williams of San Jose, is widely quoted as saying, "This case would have never gone to trial in California," hoping to differentiate the entire state from the backwoods image that many people have of Tennessee. This is itself open to question—not all of California is particularly liberal (we do have a conservative Republican governor, after all), and it's not clear that even the most liberal parts of California wouldn't find some of the material on Amateur Action to be obscene. Although Milpitas isn't in the middle of Orange County, it's not in the middle of the Tenderloin in San Francisco, either.

While the BBS has many other pictures that might or might not pass the obscenity test in various locations of the Bay Area, two types of pictures on Amateur Action could easily be considered obscene and result in a conviction in almost any community in California: sex with animals and sexualization of young children.

The BBS offers hundreds of pictures of women having sex with dogs, horses, donkeys, and other animals. There are also dozens of shots of men having sex with cows. Possible animal rights issues aside, using animals for sexual gratification could certainly be considered obscene by many.

Sexualizing children is a much deeper issue to many people, and is generally a "hot button" for people of all political persuasions. The Thomases are careful to never use the word "child" in any of their picture descriptions. Instead, they use words like "schoolgirl," "lolita," and "pre-teen." Hundreds of the photos on the BBS have captions indicating that they depict sex with children. Hundreds of photos interspersed with these are of nude children, not having sex.

When you download and look at the photos labeled as depicting child sex, you realize that the models are probably not children, but adults. Despite their pedophilic descriptions, this fact may keep the pictures themselves outside the legal definition of child pornography and obscenity. However, the board's practice of grouping pictures of actual nude children (probably from family nudist camps) in the same category as the pictures that supposedly portray adults having sex with children arguably sexualizes the children in the nudist photos in a way that the children, and their parents, would probably not consent to.

Outside the context of Amateur Action BBS, the nudist photos with the children are almost certainly not obscene. Offered in the same context with photos whose captions clearly indicate sex with children, however, the child photos become sexualized.

The photos of nude children are quite popular on Amateur Action. For example, the Thomases posted a photo of a nude family (Father, mother, two girls probably between 3 and 8 years old) a week after their conviction, and it was downloaded over 150 times in the first four days. Of course, the Thomases didn't use the word child; instead, the caption reads "Family nudism! Mom, dad, and 2 junior teens!" while the girls in the picture are very clearly under 10, one of them under 5.

Basically, the argument that Amateur Action BBS does not have any material that could be considered obscene in California isn't true. There are many possible reasons why the Thomases weren't prosecuted in the same fashion here, but to say that the Thomases would have only been convicted in conservative Tennessee completely overlooks the content and context of the particular BBS in question. ■

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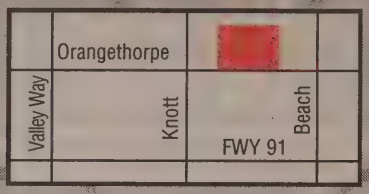

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- Genoa 8900 PCI Graphic Engine
- 2MB 32 Bit DRAM
- IDE FD/HD Controller
- 2 Serial, 1 Parallel, 1 Game Port
- Full Size Tower Case
- 15" SVGA N.I. 0.28mm Monitor
- Focus 8000 Keyboard & Calculator
- Microsoft Serial Mouse

66MHz $2399
60MHz $2329

4DX2 VLB SYSTEM

Cyrix Logic Windows Accelerator

- 486 VESA Local Bus Motherboard
- 4MB RAM, 256KB Cache
- 1.44MB Floppy Drive
- 420MB Hard Drive
- Cirrus Logic VLB 32 Bit SVGA Card (1MB)
- VLB 32 Bit IDE I/O Controller
- 2 Serial, 1 Parallel, 1 Game Port
- Full Size Tower Case
- 14" SVGA N.I. 0.28mm Monitor
- Enhanced 101 Keyboard
- Serial Mouse

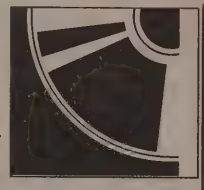
66MHz $1199
50MHz $1109
33/40MHz $1099
DX/50MHz $1199

SX DLC VLB 40

- 486 VESA Local Bus Motherboard
- 4MB RAM, 128KB Cache
- 1.44MB Floppy Drive
- 200MB 15ms IDE Hard Drive
- VLB 32 Bit SVGA Card (1MB)
- VLB 32 Bit IDE I/O Controller
- Mini Size Tower Case
- 14" SVGA 0.28mm Monitor
- Enhanced 101 Keyboard
- Serial Mouse

40MHz $989

GLIDE



through even the most advanced applications riding the innovation of our new 2X and 3X CD Drives at the speed you need for today!!

4SLC ISA

- 486SLCMHz ISA Motherboard
- 2MB RAM
- 1.44MB Floppy Drive
- 80MB16ms IDE Hard Drive
- ISA 16 Bit SVGA Card (1MB)
- ISA 16 Bit IDE I/O Controller
- Mini Size Tower Case
- 14" VGA Monitor
- Enhanced 101 Keyboard
- Serial Mouse

33MHz $675
66MHz $725

486 2X SPEED

- 486 VESA Local Bus Motherboard
- 4MB RAM, 128KB Cache
- 1.44MB Floppy Drive
- 420MB 13ms IDE Hard Drive
- VLB 32 Bit SVGA Card (1MB)
- VLB 32 Bit IDE I/O Controller
- 2 Serial, 1 Parallel, 1 Game Port
- Full Size Tower Case
- 14" SVGA N.I. 0.28mm Monitor
- Enhanced 101 Keyboard
- Serial Mouse
- Spectrum 16 SCSI Sound Board
- NEC SCSI Double Speed CD-ROM
- 6 Multi-Media CD Titles

66MHz $1549
50MHz $1459
33/40MHz $1439

486 2X SPEED

- 486 VESA Local Bus Motherboard
- 4MB RAM, 128KB Cache
- 1.44MB Floppy Drive
- 420MB 13ms IDE Hard Drive
- VLB 32 Bit SVGA Card (1MB)
- VLB 32 Bit IDE I/O Controller
- 2 Serial, 1 Parallel, 1 Game Port
- Full Size Tower Case
- 14" SVGA N.I. 0.28mm Monitor
- Enhanced 101 Keyboard
- Serial Mouse
- Sound Blaster 16 Sound Board
- Panasonic Double Speed CD-ROM
- 6 Multi-Media CD Titles

66MHz $1539
50MHz $1449
33/40MHz $1429

486 3X SPEED

ATi Mach 64 Graphic Engine

- 486 VESA Local Bus Motherboard
- 8MB RAM, 128KB Cache
- 1.44MB Floppy Drive
- 420MB 13ms IDE Hard Drive
- ATi Mach 64 SVGA Card (2MB)
- VLB 32 Bit IDE I/O Controller
- 2 Serial, 1 Parallel, 1 Game Port
- Full Size Tower Case
- 15" SVGA N.I. 0.28mm Monitor
- Focus 8000 Keyboard & Calculator
- Microsoft Serial Mouse
- Sound Blaster 16 SCSI Triple Speed CD-ROM
- NEC SCSI Triple Speed CD-ROM
- 6 Multi-Media CD Titles

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50MHz $2399
33/40MHz $2359

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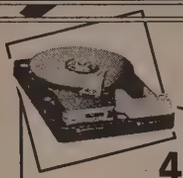
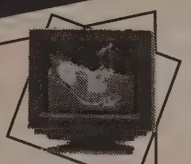
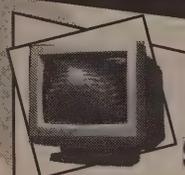


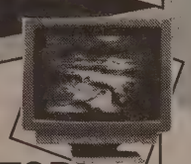
420MB 3.5" IDE HARD DRIVE
(13ms Access Time)
$225



15" SVGA MONITOR,
1280x1024, .28dp, FLAT SCREEN, 72Hz REFRESH
$335



17" SVGA MONITOR,
1280x1024, .26dp
$595



14" MONITOR,
1024x768, .28dp, NON-INTERLACED
$235

MOTHERBOARD

PCI Pentium 66MHz w/256K Cache	$850
EISA+VLB 486DX2-66MHz w/256K Cache	$450
EISA+VLB 486DX-40MHz w/256K Cache	$325
EISA+VLB 486DX-33MHz w/256K Cache	$325
VESA LB 486DX2-66MHz w/128K Cache	$325
VESA LB 486DX2-50MHz w/128K Cache	$295
VESA LB 486DX-40MHz w/128K Cache	$245
VESA LB 486DX-33MHz w/128K Cache	$245
VESA LB 486SDX-33MHz w/128K Cache	$195
VESA LB 486SDX-40MHz w/128K Cache	$199
VESA LB 486SX-33MHz w/128K Cache	$165
VESA LB 486DLC-40MHz w/128K Cache	$175
ISA 486SX-25MHz	$109
ISA 486DLC-40MHz w/128K Cache	$135
ISA 486SLC2-66MHz	$129
ISA 486SLC-33MHz	$85
ISA 386DX-40MHz w/128K Cache	$95
ISA 386SX-40MHz	$75
INTEL CPU	*add $50*
** ALL 486's CPU RECOMMENDED CPU FAN **	
CPU Cooling Fan	$10

VIDEO CARD

ATi Graphic Solution Card	$20
VGA 16 Bit 256K Card (800x600 Res.)	$26
VGA 16 Bit 512K Card (1024x768 Res.)	$34
VGA 16 Bit 1MB Card (1024x768x256 Color)	$55
Windows Accelerator w/1MB VGA Card	$69
Speedstar Pro Windows Accelerator	$119
ATi Graphic Ultra Pro w/2MB VRAM	$265
ATi Graphic Ultra Plus w/2MB DRAM	$195
VLB Cirrus Logic w/1MB Upgrade To 2MB	$89
VLB S3-805 Chip Windows Acc. w/1MB	$105
VLB ET4000/W32 w/1MB	$139
VLB ET4000/W32i w/2MB	$175
VLB ATi Graphic Ultra Pro w/2MB VRAM	$265
VLB ATi Graphic Ultra PLUS w/2MB DRAM	$195
VLB Diamond VIPER w/2MB VRAM	$320
VLB ATi Mach 64 w/2MB VRAM	$325
VLB ATi Mach 64 w/4MB VRAM	$549
PCI ATi Mach 64 w/2MB VRAM	$325
PCI ATi Mach 64 w/4MB VRAM	$549
PCI ET 4000/W32i w/2MB	$175

MONITOR

VGA Monitor	$175
14" SVGA 1024x768, .39mm	$205
14" SVGA 1024x768, .28mm	$225
14" SunShine 1024x768, .28mm N-I	$235
15" Arche 1280x1024, N-I .28mm	$335
17" SunShine 1280x1024, N-I .28mm	$595
17" MAG DX17F 1280x1024, N-I .26mm	$675

CASE

Mini Tower Case w/Power Supply	$45
Mid Size Tower Case w/Power Supply	$65
Full Size Tower Case w/Power Supply	$85

HARD DRIVE

IDE 80MB Hard Drive	$140
IDE 210MB Hard Drive	$195
IDE 340MB Hard Drive	$220
IDE 420MB Hard Drive	$225
SCSI 210MB Hard Drive	$260
SCSI 340MB Hard Drive	$370
SCSI 535MB Hard Drive	$450
SCSI 1.0GB IBM Hard Drive (8.5ms)	$720

CONTROLLERS

AT I/O 2 Serial, 1 Parallel, 1 Game Port	$14
High Speed I/O (16550 UART) 2 Serial, 1 Parallel	$35
IDE Hard & Floppy Controller & I/O	$18
IDE Hard & Floppy Controller & Hi-Speed I/O (16550 UART)	$42
IDE Hard & 4 Floppy Controller	$36
IDE Cache Controller (DC600)	$95
SCSI Cache Controller (DC800)	$225
VLB IDE HD/FD & I/O Controller	$29
VLB IDE Cache Controller (DC680)	$105
VLB IDE Hard & Floppy Controller & Hi-Speed I/O (16550 UART)	$49
VLB SCSI-2 Controller (Adaptec 6360 Chipset)	$99
VLB SCSI-2 IDE Hard & Floppy Controller & I/O (Adaptec 6360 Chipset, 16550 UART)	$145
EISA SCSI Cache Controller (DC820)	$399

KEYBOARD

101 Enhanced Non-click Keyboard	$19
101 Enhanced Click Keyboard	$23
FOCUS 2001 Keyboard	$38
FOCUS 8000 Keyboard	$45
FOCUS 9000 Keyboard	$68

FLOPPY DRIVE

NEC 5.25" 1.2 Floppy Drive	$50
NEC 3.5" 1.44 Floppy Drive	$47
TEAC 5.25" 1.2 Floppy Drive	$52
TEAC 3.5" 1.44 Floppy Drive	$50
TEAC Dual Floppy Drive	$125

MEMORY

1MB SIMM 30pin	$38
4MB SIMM 30pin	$133
4MB SIMM 72pin	$140
8MB SIMM 72pin	$280
16MB SIMM 72pin	$575
32MB SIMM 72pin	$1150

We also take Memory trade-in's!

MICE

Mouse Hi-Resolution	$18
Mouse CP-3	$10
Microsoft Mouse	$35
Truedox Trackball	$25

MULTIMEDIA UPGRADE KIT

Double-Speed CD-ROM Sound Blaster Pro 5 Title CD Disk	$399
Toshiba Double-Speed CD-ROM (200ms) Pro Audio Spectrum 16 5 Title CD Disk	$499
NEC Triple-Speed CD-ROM (195ms) Sound Blaster SCSI 16 5 Title CD Disk	$599
Double-Speed CD-ROM w/Controller	$199
CD-ROM with Controller	$145
NEC Triple-Speed CD-ROM	$365

SOUND BOARDS

Sound Blaster 16	$115
Sound Blaster Pro	$110
Pro Audio Spectrum 16	$125
Sound Boomer Card	$58
Speaker For Sound Board	$15

TAPE BACKUPS

Tape Backup Colorado DJ-20	$175
Tape Backup Archive 250MB	$165
Tape Cartridges 2120 250MB	$15

FAX & MODEM

Internal 2400B Modem	$30
Internal 9600 Fax 2400B Modem	$40
Internal 14.4 Fax 14.4 Modem	$99
External 14.4 Fax 14.4 Modem	$115

NETWORK CARD

Ethernet 8 Bit (NE1000)	$45
Ethernet 16 Bit (NE2000)	$35
Ethernet 16 Bit (10 Base-T)	$45

TERMS & CONDITIONS

- 1 Year Warranty (Parts & Labor)
- Prices Are Subject To Change Without Notice
- Defective Merchandise Must Have RMA Authorization
- 15% Restocking Charge
- Terms COD Or Prepaid (Cashier Check, Company Check, OAC)
- All Systems 14 Day Money Back Guarantee
- Quantity Discount Available
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IDE CACHING CONTROLLER
w/1MB, IT SUPPORTS 4HD & 2FD MAX. 16MB (256/1MB/4MB Simm & Can Be Mixed)
$95

VLB IDE CACHING CONTROLLER,
IT SUPPORTS 4HD & 2FD MAX. 16MB (256/1MB/4MB Simm & Can Be Mixed)
$105

HIGH SPEED I/O CARD,
2 SERIAL PORT/2 PRINTER PORT (FIFO) w/16550 CHIP 4 INDEPENDENT IRQ LEVELS FOR SERIAL PORTS (IRQ 3,4,5,9)
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3.5" FORMAT, 1" HEIGHT
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Resources

Calendar Of Events

Conferences, Shows, Special Events

September

September 3 Computer Show And Sale Expo. Panorama City. Bonanza Show Productions. Call: Paul, (415)595-1053.

September 3–4 Computer Show And Sale. Ventura County Fairgrounds. MarketPro Shows. Call: 1-800-708-7555.

September 6–9 Windows Solutions '94 Conference And Expo. San Francisco. ZD Expos. Call: 1-800-488-2883.

September 10 Computer Show And Swap Meet. CSU, Northridge. Advertising Concepts Productions. Call: Frank or Beth Perez, (805)520-1423.

September 10–11 Computer Show And Sale. Glendale Civic Auditorium. MarketPro Shows. Call: 1-800-708-7555.

September 10–11 Computer Show And Sale. Scottish Rite Center, San Diego. MarketPro Shows. Call: 1-800-708-7555.

September 11 Computer Marketplace. Sequoia Conference Center, Buena Park. National Productions. Call: 1-800-800-5600 or (408)778-5200.

September 13–16 Seybold San Francisco Conference And Expo. San Francisco. ZD Expos. Call: 1-800-488-2883.

September 14–16 COMPUEXPO. San Jose. COMPUEXPO. Call: Marcia Gulino, (415)905-2354.

September 17 California Computer Show And Sale. Anaheim Stadium. Robert Austin Corp. Call: (415)347-0100.

September 18 Computer Show And Sale. Antelope Valley Fairgrounds, Lancaster. MarketPro Shows. Call: 1-800-708-7555.

September 19–23 LISA VIII: USENIX System Administration Conference. San Diego. USENIX and SAGE. Call: (714)588-8649.

SEPTEMBER 24–25

AMERICAN COMPUTER MEGA SHOW

CAL STATE FULLERTON

American Mega Show presents the American Computer Mega Show. There will be over one hundred companies selling their latest products, including complete systems, affordable notebooks, multimedia, printers, disk drives, and computer accessories with up to a 50% discount. Also choose from a huge selection of business, game, and educational software. The show takes place in the Titan Pavilion, Saturday and Sunday, from 10 am–5 pm. For information call (818)961-3782.

CALL FOR PARTICIPATION

TECHNOLOGY AND PERSONS WITH DISABILITIES CONFERENCE

The Center on Disabilities, producer of the tenth annual Technology and Persons With Disabilities Conference to take place in Los Angeles in March 1995, is inviting authors to share applications of hardware and software, adaptive devices, training programs, and results of research. There is also a heavy consumer orientation to the conference, so papers of interest to parents and persons who are themselves disabled are encouraged. The conference is international in scope and focuses on infant, preschool, elementary, and secondary school programs for children with disabilities, their families, teachers, and school administrators; college and university programs; professors, physicians, clinicians, researchers, counselors, and program administrators; rehabilitation engineering; service providers; and administrators from the Department of Rehabilitation and other community agencies. The deadline for submissions is October 16, 1994. For more information and a proposal form contact Dr. Harry J. Murphy, Center on Disabilities, CSU Northridge, 18111 Nordhoff St., Northridge, CA 91330-8340; phone (818)885-2578, email hmurphy@vax.csun.edu.

COMPUTER SHOW

Location Change

Beginning September 10, the Cal State Northridge Computer Show is moving indoors. The new location is the Student Union Hall located between Nordhoff and Lindley on Zelzah Ave. Patrons may park at Lot C on Zelzah Ave. between Nordhoff and Plummer St. The Cal State Northridge Computer Show is takes place on the second Saturday of every month. Admission to the show is $2 and parking is free. Call Frank or Beth Perez at (805)520-1423.

OCTOBER 8 & 9

computer marketplace

FAIRPLEX EXPO CENTER, POMONA

Computer Marketplace, sponsored by National Products, is the place to discover new technology, new products, and the latest trends. One day pass costs $7 and includes exhibits and nineteen seminars for beginners to advanced computer users. Show hours are from 10:00 am to 5:00 pm. Call: 1-800-800-5600.

September 20–22 Embedded Systems Conference And Expo. Santa Clara Convention Center. Miller Freeman, Inc. Call: Marcia Gulino, (415)905-2354.

September 24–25 American Computer Mega Show. CSU, Fullerton. American Mega Shows. Call: (818)961-3782.

September 25 ACP Computer Swap Meet. 1310 E. Edinger, Santa Ana. ACP. Call: (714)558-8813.

September 25 Computer Show And Sale. Oxnard Community Center. MarketPro Shows. Call: 1-800-708-7555.

September 28 Fifth Annual Computer Publishing And Marketing Conference. San Jose. SIMBA Information and *Inside Media* magazine. Call: Hillary Veeder, (203)834-0033, ext. 171.

October

October 1 Computer Show And Sale Expo. Panorama City. Bonanza Show Productions. Call: (415)595-1053.

October 1–2 Computer Show And Sale. Glendale Civic Auditorium. MarketPro Shows. Call: 1-800-708-7555.

October 1–2 Computer Show And Sale. Scottish Rite Center, San Diego. MarketPro Shows. Call: 1-800-708-7555.

October 2 Computer Marketplace. Sequoia Conference Center, Buena Park. National Productions. Call: 1-800-800-5600 or (408)778-5200.

October 4–6 Digitalk Dev Con '94: Object Architecture For Client/Server Conference. Irvine. Digitalk. Call: 1-800-531-2344.

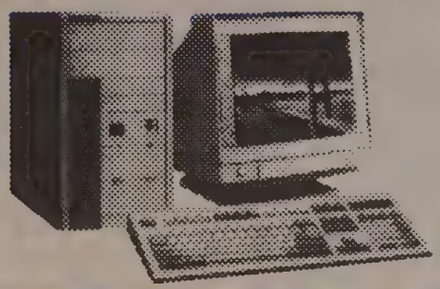
October 7–9 Small Office And Home Office Expo And Conference. Anaheim Convention Center. Advanstar Expositions. Call: 1-800-854-3112.

October 8 Computer Show And Swap Meet. CSU, Northridge. Advertising Concepts Productions. Call: Frank or Beth Perez, (805)520-1423.

October 8–9 Computer Marketplace. Fairplex, Pomona. National Productions. Call: 1-800-800-5600 or (408)778-5200.

DX2/66

FREE 14" COLOR MONITOR!



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What's more, you get prompt upgrade service, technical support, 24 hour-a-day phone support and call backs in less than 10 minutes, guaranteed!

This shouldn't surprise you since we are known to more than 25,000 customers. Our sales and service reps have the best reputation for prompt and courteous service in Southern California.

So call and order an Integra DX2-66 computer today. No need to shop the clubs or compromise on quality, service and performance. Now's the best time to purchase your 486 at the right price. And put the bull out to pasture.

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Saturday, October 22, 1994
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From 170 exit Roscoe Blvd. to Van Nuys Blvd. Right on VanNuys Blvd. to Parthenia.
From 405 exit Roscoe Blvd. to Van Nuys Blvd. Left on Van Nuys Blvd. to Parthenia.
For info call: 1(415) 595-1053

October 8–9 Organizing For Access: National Forum On Computer Networking, Community Action, And Democracy. San Diego. Computer Professionals for Social Responsibility. Call: (415)322-3778 or cpsr@cpsr.org .

October 11–13 MultiMedia Expo And Conference. San Francisco. American Expositions, Inc. Call: (212)226-4141.

October 12–14 TeleCon XIV: Applications Of The National Information Infrastructure. Anaheim Convention Center. Applied Business teleCommunications. Call: 1-800-829-3400.

October 15 Computer Marketplace. Earl Warren Showgrounds, Santa Barbara. National Productions. Call: 1-800-800-5600 or (408)778-5200.

October 15–16 American Computer Mega Show. Orange County Fair Expo Center. American Mega Shows. Call: (818)961-3782.

October 15–16 Computer Show And Sale. Ventura Fairgrounds. MarketPro Shows. Call: 1-800-708-7555.

October 16 Computer Show And Sale. Antelope Valley Fairgrounds, Lancaster. MarketPro Shows. Call: 1-800-708-7555.

October 22–23 Computer Show And Sale. Del Mar Fairgrounds. MarketPro Shows. Call: 1-800-708-7555.

October 22–23 International Computer Show And Sale. Pasadena Center. R.G. Canning. (213)587-1500, Event Ext. 4; (909)628-4236, Event Ext. 50.

October 24–26 National Human Resources Information Technology Expo And Conference. San Jose. Blenheim NDN. Call: Jill Reynolds, 1-800-232-3976.

October 26–28 USENIX Symposium On Very High Level Languages. Santa Fe, NM. USENIX Association. Call: (714)588-8649.

November

November 2–3 PageMaker Conference. Los Angeles. Thunder Lizard Productions. Call: (206)285-0305.

November 6–10 Applications Of Software Measurement Conference. La Jolla. Software Quality Engineering. Call: 1-800-423-8378.

November 12 Computer Show And Swap Meet. CSU, Northridge. Advertising Concepts Productions. Call: Frank or Beth Perez, (805)520-1423.

November 12–13 American Computer Mega Show. UCLA. American Mega Shows. Call: (818)961-3782.

November 14–18 COMDEX Conference. Las Vegas, NV. Smith & Shows. Call: (617)449-6600.

November 27 ACP Computer Swap Meet. 1310 E. Edinger, Santa Ana. ACP Call: (714)558-8813.

December

December 10 Computer Show And Swap Meet. CSU, Northridge. Advertising Concepts Productions. Call: Frank or Beth Perez, (805)520-1423.

December 12–14 DECUS Conference. Anaheim. Smith & Shows. Call: 1-800-842-7220.

December 17–18 American Computer Mega Show. CSU, Northridge. American Mega Shows. Call: (818)961-3782.

Classes, Seminars, Workshops

September

September 12–13 NetWare Getting Started Seminar. Los Angeles. Center For Advanced Professional Development. Call: (714)261-0240.

September 16 Trekking Through The Wilderness: Where Is The Information Superhighway? Workshop. Monrovia. Los Angeles Chapter of the American Society for Information Science. Call: Nancy Zachariasen, (818)395-6704.

September 17 Workshop For Entrepreneurs. Caltech campus, Pasadena. Caltech/MIT Enterprise Forum. Call: (818)395-3916.

September 24 Advanced Training New Machines: LS202 Seminar. Irvine. Diversified Technigraphics, Inc. Call: 1-800-457-5776.

September 26 Making Multimedia Deals Seminar. Los Angeles. Sensational Seminars, Inc. Call: Nina Steiner, (310)288-3425.

September 29–30 The Macintosh Survival Course. Los Angeles. Data-Tech Institute. Call: (201)478-5400.

October

October 1–2 Basic Laser Service

"The Traveling Mall That Has It All"

Computer MARKETPLACE

COMPUTER TRADE SHOW
WHOLESALE PRICES
OPEN TO THE PUBLIC

10:00 a.m. to 5:00 p.m.

Pomona Shows 300 EXHIBITS

Hundreds of companies having price wars to compete for your business. You couldn't find this much inventory in a hundred computer stores nor at these prices. There is also a consignment table to sell your computer equipment.

SHOW DATES

September 10 Saturday	**RESEDA** - Sherman Entertainment Center From 101 Freeway, take Reseda off ramp, turn left (if traveling East) to Sherman Way, turn right, one block to Canby Street. 18430 Sherman Way	Admission: $5.00
September 11 Sunday	**BUENA PARK** - Sequoia Conference Center Take the Beach Blvd. Exit off the 91 Freeway, go one block North to 7530 Orangethorpe.	Admission: $5.00
September 17 Saturday	**SAN MATEO** - EXPO CENTER (San Mateo Fairgrounds) From Hwy 101 take 92 West. Take the Delaware Street Exit. Turn right on Delaware. Follow signs to Expo Center.	**PREMIER SHOW ADMISSION FREE!**
October 1 Saturday	**RESEDA** - Sherman Entertainment Center	Admission: $5.00
October 2 Sunday	**BUENA PARK** - Sequoia Conference Center	Admission: $5.00
*** October 8 & 9** Saturday & Sunday	**POMONA** - Fairplex (LA County Fairgrounds) ***MORE THAN 20 SEMINARS SCHEDULED FOR THIS SHOW!!** Exit Highway 10 at Fairplex Drive. Go North to McKinley, turn right. Turn Left on White Avenue to Gate 14.	Admission: $7.00
October 15 Saturday	**SANTA BARBARA** - Earl Warren Showgrounds Highway 101 and Las Positas.	Admission: $5.00
October 22 Saturday	**SAN MATEO** - EXPO CENTER (San Mateo Fairgrounds)	Admission: $5.00
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BBS Spotlight

By John Wolcott

Calling The Burbs

I recently overheard a couple of modem wizards at the local computer store engrossed in connection talk. "Oh, so you haven't surfed the Internet?" said one. The response was "Nope, haven't done that yet, but have you been on some of the great local boards? They have some great stuff!" Right he was. There are plenty of terrific local BBSes that will fill your modem needs without going to the expense of Internet access or the drudgery of learning the ropes of a big commercial online system.

The Burbs BBS (or properly called The Suburbs) is an adult only bulletin board offering many features for a very modest subscription fee. Located in Fullerton and serving the BBS community for over seven years, The Burbs now has sixteen incoming phone lines. Some of the phone lines cover other calling areas to help with your phone bill. This is a popular place with a registered user base of over 800.

The Burbs is supported by an 386/40 PC on a Novell Network to access the file server. Two US Robotics Dual Standard modems will connect you at 9600 baud and the other fourteen are DIS Compucom modems allowing 2400 baud access. ANSI graphics are supported on Galacticom's v6.1 BBS software.

Sysops Larry Williams (alias Lary) and Melody Bargin (alias Lady M) work hard to provide a pleasurable bulletin board experience. Williams commented, "I started the board because it is really fun being online and running the service. It started as a BBS for all age groups, but I found that going to adult only access changed the climate of the board very favorably."

System features include The Hot Tub group chat, Forums, The File Library, The Story So Far, Games, The Wall, Electronic Mail, and Dating Services. These features amount to the most commonly sought features by BBS users.

The Hot Tub group chat will allow a group conference among connected users. Whatever you type, other connected users in chat will see. For example, if your alias is "Snake" and you type "Look Lady M," others will see "Snake is looking Lady M over." Lady M will see "Snake is looking you over" and you will get a display of "You are looking Lady M over... See anything you like?" Of course, this is assuming that Lady M is also in chat. A complete list of "action commands" at your disposal will be displayed if you type "/a list" from within the chat conference. It's a good idea to print this list so that you have a ready reference for all of the actions you'll want to use.

The Forums give you a chance to investigate and discuss any topic imaginable. You'll find everything from Boating and Classified Ads to Photography and Skydiving discussed at length. Users review and respond to previously created messages addressing a particular topic as well as creating new messages for others.

The File Library will allow you to download IBM-compatible programs. With over 10,000 files you will fine almost any type of program that interests you. All of the files available have been checked by a Sysop for viruses before being posted.

The Story So Far gives you an opportunity to author chapters in various online novels. You may choose to just read what others have contributed or add a new twist of your own. Soap operas, murder mysteries, poetry, and space travel are among the topics awaiting your creative talents.

Online games include such popular titles as Fazuul and Hangman. Fantasy role-playing within the online games can be addicting. This is a pleasant diversion from chatting or downloading and can be substantially less expensive than buying new software game titles.

The Wall is a graffiti style presentation of whatever users feel like writing. Zany messages are commonly displayed and you may add your own commentary. Messages here are anonymous, so be creative!

The Dating Service and Electronic Mail and allow users match attributes and leave mail for each other. This is a good way to personalize messages to a particular user that you don't want everyone else to see. You will make new friends and stay in touch with others who regularly connect.

The Burbs can be reached by calling (714)871-9000 with the standard protocols of 8-N-1. This BBS proves to be an excellent value for your time investment and modem usage dollar. Give the Burbs a call and tell 'em MicroTimes sent you.

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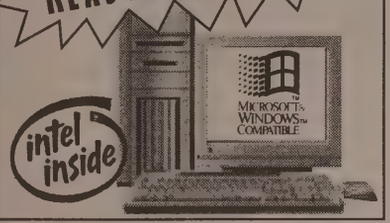

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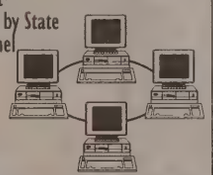

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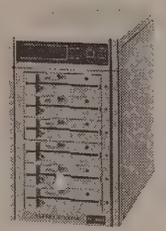

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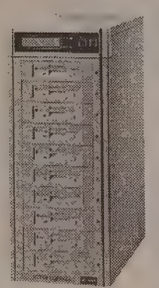

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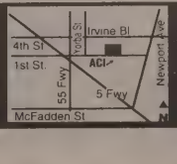

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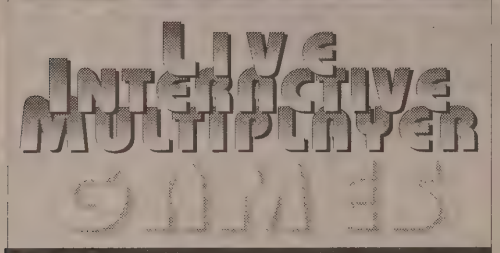

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	714/255-9201	714/972-2007	714/248-0022
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310

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Continued on page 168

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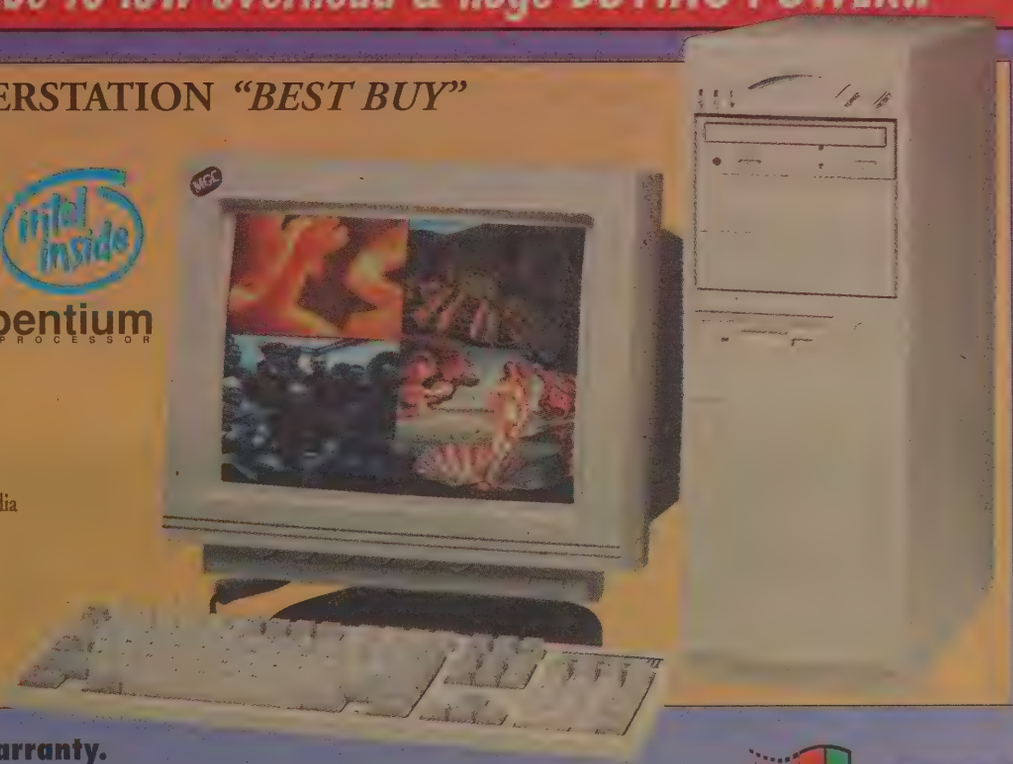

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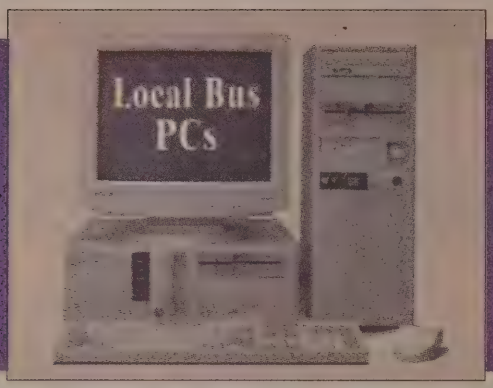

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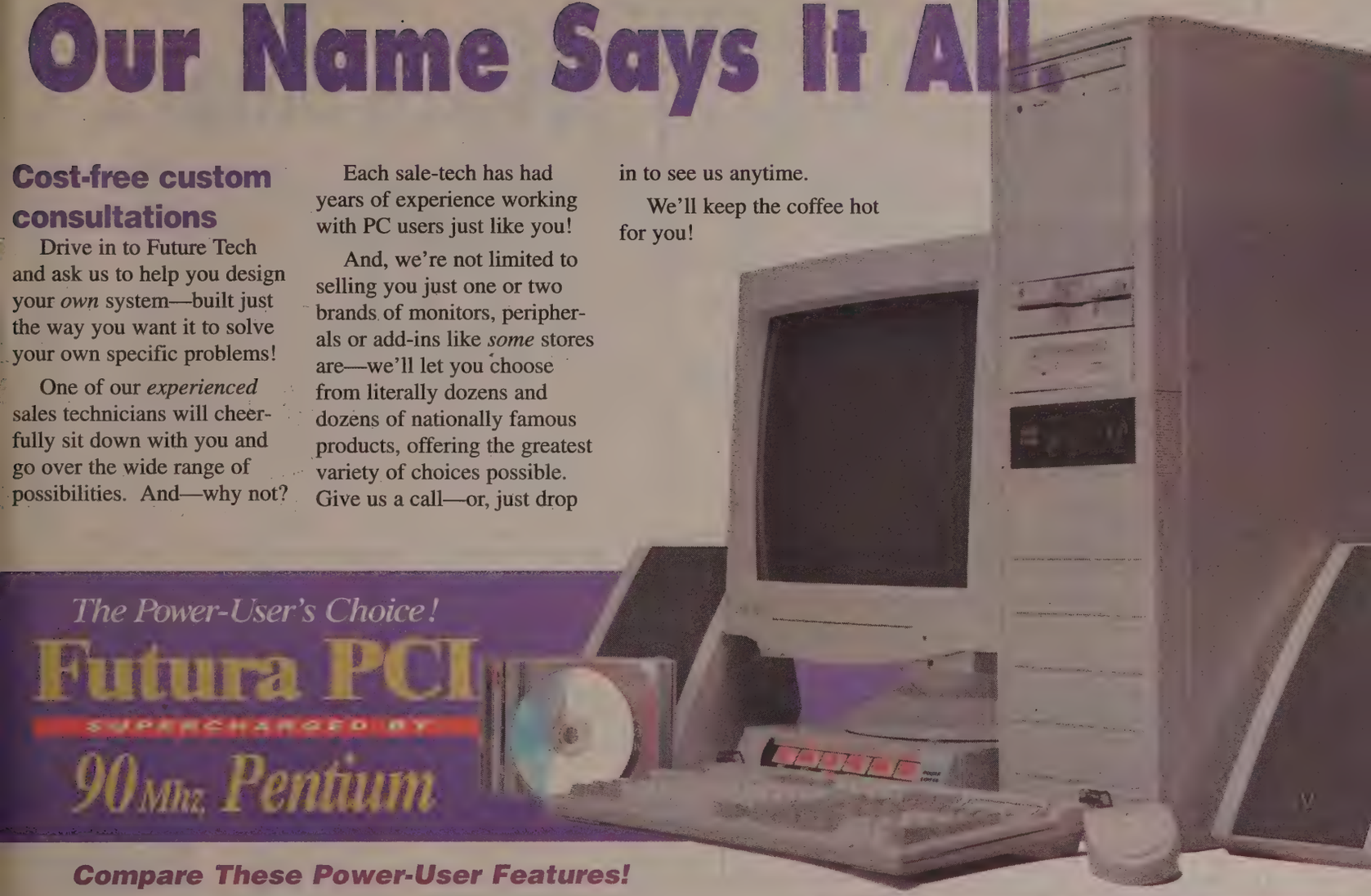

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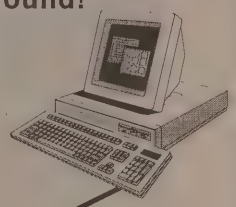

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Moroni BBS. (310)392-3981. 24 hrs., 300/1200/ 2400/ 9600. Includes hundreds of Mormon church-related documents plus 650MB of shareware. Free. [Exp. #127.]

New World Order BBS. (310)978-0024. 24 hrs., 300–28,800. Technical, schoolwork help, OJ's trial, online games, helpful sysop. Free. Sysop: Richard Schwartz. [Exp. #129.]

Oasis BBS. (310)462-1239. 8-N-1, 24 hrs., 2400/14,400. Public forums on various topics from Russia to ancient Greek. Free. [Exp. #129.]

One World. (310)372-0987. Ecology, gardening, health, alternative news, international network. Free. [Exp. #129.]

Original Apple Corps BBS. (310)454-4660. Apple II support. Sysop: Ed Molina. [Exp. #129.]

Servant Christian BBS. (310)371-2770, 371-3130, 371-0251. 14,400. Three lines. A modem ministry for both Macintosh and Windows users. [Exp. #128.]

South Bay Apple Computer Club BBS. (310)538-1913. 8-N-1, 24 hrs., 14,400. Apple II support and free Internet access. No fee. [Exp. #128.]

South Bay Apple Mac User Group BBS. (310)792-8083, 792-0264. 24 hrs., 300–9600. FirstClass. Administrator: Dr. Dave. [Exp. #128.]

The Spider's Web BBS. (310)416-9901. Games, recovery and 12 step msg. areas, BikeNet, ecology, spirituality, science and more. Free. [Exp. #127.]

Starfleet HQ II BBS. (310)422-8178. 8-N-1, 24 hrs., 300–28,800. Online games, VNET and other networks, Star Trek news/discussions. No fees. Sysop: Rodney Palmer. [Exp. #128.]

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Upper Transylvania BBS. (310)515-6843, 515-6953. 24 hrs., 1200–14,400 Seven CDs online, Christian, family-oriented fun for the PC user. Free. Sysop: Ron Hoffman. [Exp. #127.]

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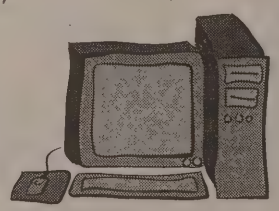

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DZBO's Monitor 1. (818)989-3286. 24 hrs., 2400. Astronomy, art, graphics, tools, games, teens, adults, classifieds, more. Free. Sysop: K. D. Dizibio. [Exp. #129.]

The Galaxy-II BBS. (818)706-0130. Up to 28,800. Four lines. Supports PBM game of Galaxy-II. Corridor 7, Doom, 45 friendly door games, more. Free. Sysop: Brett Tondreau. [Exp. #129.]

Gifshoppe BBS. (818)989-0975. 24 hrs., 2400–14,400. Eight lines. Games, matchmaker, 8GB adult GIFs, ThrobNet, HotNet, WildNet, FidoNet. Sysop: Dan Bauer. [Exp. #128.]

Hottips BBS, Glendale. (818)248-3088. 1200–28,800. Five lines. 11,000+ files, 1.7GB online, QWK mail door, professional emphasis. RIME Network. Sysop: Michael D. Callaghan. [Exp. #128.]

InvestorLink. (818)331-4611. 8-N-1, 24 hrs., 9600. Business and finance, investment, Cal. real estate, daily commodity prices, real-time news. Free. Sysop: Steve Painter. [Exp. #129.]

The Labyrinth Shareware Registration System. (818)792-2523. 8-N-1, 24 hrs., 2400–14,400. Shareware for free! Register online. Tech support by authors. Sysop: Chris Schurer. [Exp. #129.]

LA Free-Net. (818)776-5000. 8-N-1, 24 hrs., up to 14,400. 16 lines. Nonprofit community network with extensive Internet connections: newsgroups, gopher, email; and more. $10/year. Sysop: Alex Jalinous. [Exp. #127.]

Movers & Shakers—Parkinson's Center BBS. (818)776-2784. 24 hrs., For Parkinson's Disease patients, caregivers, families/friends of Parkinsonians, and medical community. Warm and personal. Free. [Exp. #127.]

P-Funk Online. (818)914-0498. 8-N-1, 24 hrs., 2400. Internet, Usenet, GIFs, games, N Azusa 4 da'funk. Still free. Sysop: jeffery@pfunkonline.com . [Exp. #129.]

Pro-Line. (818)730-9896. 46 lines. Chat, matchmaking, lifestyles, email, files, games, fun, and more. Free trial. [Exp. #129.]

Reflex Connect. (818)563-9345. 24 hrs., 14,400. Windows for Workgroups 3.11 remote access login, ID:Guest, pswd:password, Domain:RAS-TA. leave msg. in \users\regist\guest. Free. [Exp. #129.]

Spectrum BBS. (818)757-3532, 764-5877. 24 hrs., 2400/14,400. Eight lines. TradeWars 2002, Mutants, other games, Internet, WorldLink, chat. Free trial. Co-sysop: Mark Drapkin. [Exp. #128.]

The Sports Club BBS. (818)792-4752. 24 hrs., 2400–14,400. Sports messaging, sports doors, echomail networks, Internet email and newsgroups. Sysop: Tom Fota. [Exp. #128.]

StarShine BBS. (818)577-7827, 577-5155 (9600). Up to 9600. Five lines. Community based, chat, CD-ROM library, user uploads. Free chat to end of '94. Sysop: Didi Dey. [Exp. #128.]

Wizardry BBS. (818)222-4444. 2400–14,400. Online games, downloads, uploads, adult GIF and text files. Free. [Exp. #129.]

Wyrm BBS. (818)793-2426. 8-N-1, 24 hrs., 9600. AD&D, Ada, neural nets, and games. Files user evaluated. Free. [Exp. #127.]

909

CafeXpresso. (909)944-3336. 8-N-1, 24 hrs., 2400. Writers, readers, artists, the coffeehouse culture. Sysop: Joseph Valentinetti. [Exp. #127.]

Cedar Village User's Group BBS. (909)356-1269. 8-N-1, 24 hrs., 14,400. Latest shareware, many online games, FidoNet, Westcoast Net. $25/yr. Sysop: Tony Barnes. [Exp. #128.]

Classifieds Online. (909)599-6153. 8-N-1, 24 hrs. Read and enter your private party ads FREE! Cars to computers to real estate. New ads daily. Sysop: Al Graham. [Exp. #127.]

Dragon's Lair BBS. (909)794-4340. 8-N-1, 24 hrs., 1200–14,400. CD-ROM, large file base, FidoNet, WWIVnet, ICEnet, many echoes, msg. bases. Free access. Sysop: Hawkeye. [Exp. #129.]

The Empire BBS: The Next Generation. (909)946-1448. 24 hrs., 300–14,400. Chat, all welcome, matchmaker, flower shop, files, SIGs, multiline. Free. Sysops: Tigana and Emperor. [Exp. #128.]

For Womyn Only BBS. (909)353-9622. 24 hrs., 2400. Women's issues oriented BBS. Email only, no files. Friendly sysop. Free. [Exp. #128.]

Legend Graphics Online. (909)689-9229. 24 hrs., 16 lines. Super VGA photo images, MoviePICs, huge adults-only file areas. [Exp. #128.]

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USER GROUPS

AMIGA

Amiga Users Group Of Long Beach. Meetings: 1st Thurs., 7:00 pm, Fire Station Bldg., 5373 E. Second St., Belmont Shores. All persons with an interest in the Amiga computer welcome. Free. [Exp. #131.]

ATUG—San Gabriel Valley. Meetings: last Tues., 7:00 pm, Michelangelo's Pizza, San Dimas; 3rd Sat., 11:00 am, 1st Southern Baptist Church, Temple City. Call: Steve Ward, (818)285-6424. [Exp. #132.]

LAAUG—Los Angeles Amiga User Group. Meetings: 3rd Wednesday, 7:30 pm. Veteran's Memorial Auditorium, Overland Ave. & Culver Blvd. Super SIGs, PD disks. Call: Gene Edwards, (213)384-8711. LAAUGLine BBS: (213)387-1002. [Exp. #129.]

SFVAUG—San Fernando Valley Amiga User Group. Meetings: 2nd Tues., 7:00 pm, "The Meeting Place" off the Food Court in Fallbrook Mall. Continuing the exploration of the Amiga in the area's most active Amiga Orphan support group. Call: Ernie, (805)526-8252. [Exp. #130.]

APPLE

Champions Of The Mac Proletariat (CHOMP). Meetings: 4th Thurs., 7:30 pm, Cal Poly Pomona. Question and answer, raffle of useful software, opportunity to purchase disks. Call: Craig Richards, (909)985-7385 or Mitch Cohen, (909)598-5766. [Exp. #132.]

Original Apple Corps. Meetings: 2nd Sun., West LA area. Apple II and Mac user group. Support for beginners through experts. Call: Fred Duffy, (310)450-3336. [Exp. #132.]

ATARI

All Computer Association Of Orange County. Meetings: 2nd Sun., 1:00 pm, Fullerton Savings, 12860 Euclid Ave., Garden Grove. Supporting Atari, Macintosh, PC, and other computer systems. Call: (714)960-6111. [Exp. #130.]

ATESIG—Atari 8-Bit SIG. Meetings: 145 Surf Pl., Seal Beach. Cooperative user group for model railroad applications. Call: (310)430-5433. [Exp. #130.]

South Bay All Computer Enthusiasts. Meetings: 2nd Tues., 7:30 pm, VFW Hall, 1865 Lomita Blvd., Lomita (1 block W of Western). All skill levels. Call: Danny or Mary, (310)834-0040. [Exp. #128.]

COMMODORE

Commodore Technical Users Group (C=TUG). Meetings: 4th Sunday, 1:00 pm, Senior Citizen Center, 170 S. Olive St., Orange. Public domain library, documents library, and magazine. Software and hardware help. Call: Daniel, (714)871-7570. [Exp. #128.]

South Bay Commodore Users Group. Meetings: 3rd Thurs., 7:00 pm, SCE Redondo Generating Station, 1100 Harbor Dr. (across from King Yacht Harbor), conference room. Support for 64/128 computers; receive or exchange information on programs, applications, or hardware. Call: (310)324-8357. [Exp. #130.]

CORELDRAW

CorelDRAW User Group (independent). Meetings: 2nd Mon., 7:30 pm, Jolly Roger Hotel, 2904 Washington Blvd., Marina Del Rey. Speakers on design and printing, CorelDRAW tutorials, and favorite shareware. Call: Michael, (310)545-1478. [Exp. #130.]

EPSON

Epson UG/Orange County. QX, PX, CP/M, VALDOCS—support, tech, periodical & disk library, parts. Call: (714)893-3305 or (310)430-4731. [Exp. #130.]

FINALE

Finale User Group (FUGUE). Meetings: 4th Wed., 7:30 pm, Electronic Music Box, 14947 Ventura Blvd., Sherman Oaks. Tips and problem solving. Bring files on disk. SIG of LAMG. Call: Bonnie Janofsky, (213)658-5997. [Exp. #131.]

IBM & COMPATIBLES

All Computer Association Of Orange County. Meetings: 2nd Sun., 1:00 pm, Fullerton Savings, 12860 Euclid Ave., Garden Grove. Supporting Atari, Macintosh, PC, and other computer systems. Call: (714)960-6111. [Exp. #130.]

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USER GROUPS cont.

Meetings: 2nd Sun. (3rd if 2nd is holiday), 3:00 pm, Speakers, software, BBS, and more. Contact: Tony Barnes, P.O. Box 1141, Bloomington, CA 92316, or modem (909)356-1269. [Exp. #131.]

Greater South Bay PC User Group. Meetings: 2nd Thurs., 7:30 pm, Torrance Recreation Center located behind the main city library, Torrance. Visitors welcome. Email: (310)335-2799. [Exp. #131.]

Long Beach IBM PC And Compatibles Users Group. Meetings: 3rd Wed., 7:00 pm, Masonic Temple, 5155 E. Pacific Coast Hwy., Long Beach. Novice and experienced welcome, BBS, public domain library, newsletter, SIGs. $25/year, $35 for families. Call: Jim Wells, (310)439-7114. [Exp. #132.]

Los Angeles Computer Society. Meetings: 2nd Tues., 7:00 pm, Culver City High School, 4401 Elenda St., Culver City. Presentations from prominent software and hardware developers and Q&A sessions. Call: (310)471-2726. [Exp. #132.]

Orange County IBM PC Users Group. Meetings: 2nd Tues., 6:30 pm. Speakers, software, newsletter, BBS. Open to public, all welcome. Call: (714)990-0580. [Exp. #130.]

Pasadena IBM Users Group. Meetings: 3rd Wed., 7:00 pm, 2184 N. Lake Ave., Altadena. Speakers on hardware/software, SIGs, library, newsletter, and BBS. Call: Steve Bass, (818)791-1300. [Exp. #132.]

San Bernardino PC Users Group. Meetings: 1st Wednesday, Jack Brown Hall, Rm. 129, Cal State University, San Bernardino. Specializing in IBM and compatibles. Free admission. Call: Arthur Saltzman, (909)880-5755. [Exp. #127.]

Software Users Group Of O.C. Meetings: monthly in Irvine. Serves IBM compatible users who are new to computers. Call: (714)721-8751 (modem). [Exp. #129.]

South Bay All Computer Enthusiasts. Meetings: 2nd Tues., 7:30 pm, VFW Hall, 1865 Lomita Blvd., Lomita (1 block W of Western). All skill levels. Call: Danny or Mary, (310)834-0040. [Exp. #128.]

Southern California Computer Society. Meetings: 4th Tues., 7:00 pm, Farmers & Merchants Bank, 12535 Seal Beach Blvd., Rossmoor. We welcome all who are interested in computers; BBS and newsletter. $15/yr. Call: Hank Burwash, (310)596-9670. [Exp. #132.]

Thousand Oaks Personal Computer Club (TOPCC). Meetings: 4th Thurs., 6:30 pm, Goebel Senior Adult Center, 1385 E. Janss Rd., Thousand Oaks. Call: (805)494-8675. [Exp. #132.]

TUG-NET. Meetings: First four Thurs., 7:00 pm, Glendale Federal Bank, 7119 Topanga Cyn. Blvd., Canoga Park. Ample parking, visitors free. Call: (818)249-1629 or 884-9441. [Exp. #132.]

Valley Computer Club. Meetings: 1st Wed., 7:00 pm, Burbank Board of Realtors Bldg., 2006 W. Magnolia, Burbank. BBS, PD library, SIGs, newsletter. All welcome. Fee, $4. Call: Estella McClintock, (818)848-1948 or Grayce Hruda, (818)842-3707. [Exp. #131.]

Valley IBM Compatible Uses Group (VICUG). Meetings: 3rd Fri., 7:00 pm, State Bldg., 6150 Van Nuys Blvd., Van Nuys. Call: Harry Tischler, (818)997-1470. [Exp. #131.]

KAYPRO

KAYOS Kaypro User Group. Meetings: 4th Mon. of even months, 6:00 pm, El Segundo Library, Mariposa and Richmond streets. Call: (310)379-8339. [Exp. #131.]

MACINTOSH

All Computer Association Of Orange County. Meetings: 2nd Sun., 1:00 pm, Fullerton Savings, 12860 Euclid Ave., Garden Grove. Supporting Atari, Macintosh, PC, and other computer systems. Call: (714)960-6111. [Exp. #130.]

Champions Of The Mac Proletariat (CHOMP). Meetings: 4th Thurs., 7:30 pm, Cal Poly Pomona, grey building near administration building, rm. P2-7. Call: Craig Richards (909)985-7385 or Mitch Cohen, (909)598-5766. [Exp. #132.]

Los Angeles Macintosh Group (LAMG). Meetings: 3rd Tues., 7:30 pm, Dept. of Water & Power, 111 N. Hope St. Free meeting, everyone welcome. Call: (310)278-LAMG. [Exp. #128.]

Original Apple Corps. Meetings: West LA area. Apple II and Mac user group. Support for beginners through experts. Call: Fred Duffy, (310)450-3336. [Exp. #128.]

South Bay Apple Mac User Group. Meetings: Last Wed., 8:00 pm, El Camino College, MCSC Rm, 100, 16007 Crenshaw Blvd., Torrance. Newsletter, PD library, demos, and raffles. Call: (310)644-3315. [Exp. #131.]

Southern California Macintosh Owners/Users Group (SMOG). Meetings: usually 2nd Sat., 10:00 am, Western Digital Bldg., off 405 Freeway at Irvine Center Dr., Irvine. Speakers, product demos, Q&A, PD disks. All skill levels. Call: Dani Maloy, (909)698-7737. [Exp. #132.]

West Orange County Macintosh User Group (WOCMUG). Meetings: last Tues., 7:00 pm, Emerson Elementary School, 2625 Josie, Long Beach (NE corner of Palo Verde and Willow). Come and join with other Mac users to share knowledge and experiences. Call: Lynn Goodrich, (714)892-8910; or Tony Muller (310)493-1240. [Exp. #127.]

POWERBUILDER

Los Angeles PowerBuilder User Group. Meetings: 1st Tues., 6:00 pm, Sony Entertainment, 3400 Riverside Dr., Burbank. [Exp. #131.]

PROGRAMMING LANGUAGES

The Software Toolsmiths. Meetings: Last Sat., 10:00 am, Joslyn Center, 339 Sheldon St., El Segundo (except Nov. and Dec.). Discussions and tutorials on programming: C++, Forth, J, Smalltalk, algorithms, etc. Neophytes welcome. Call: John LuValle, (818)797-1820, or Howard Rogers, (310)532-3342. [Exp. #131.]

UNIX

UUASC, The UNIX User's Association Of Southern California. Meetings: 2nd Mon., 7:00 pm, New Horizons Computer Learning Center, 1231 E. Dyer Rd., Santa Ana. Geared to professional and amateur users of all flavors of UNIX, including Linux. Call: Larry, (714)526-4347. [Exp. #130.]

ASSOCIATIONS

American Society For Information Science, Los Angeles Chapter. For information professionals concerned with a variety of topics: library automation, the information superhighway, etc. Call: Carolyn Loeffler, (310)825-4019. [Exp. #127.]

Independent Computer Consultants Association, Los Angeles Chapter. Meetings: 1st Thurs., 6:00 pm. Prepaid reservation, $25, or at the door, $35. The LA chapter provides referral services. Call: (213)872-1811. [Exp. #127.]

Planet Data Service Company's Desktop Publisher's Association. Meetings: 1st Mon., 7:00 pm. Call: (818)332-0329. Support group and networking for those in DTP fields. Newsletter, referrals, and more. $50/yr. [Exp. #131.]

Software Council Of Southern California. Meetings: usually 4th Wed., 6:00 pm, Long Beach Marriot, Main Ballroom, 4700 Airport Plaza Dr.; also breakfasts and luncheons around SoCal. A nonprofit trade association of software development organizations and companies providing support and services to the local software industry. Call: Bill Manassero, (310)328-0043. [Exp. #132.]

Continued from page 108

uct is simple and straightforward. You simply select the topic you want advice or instruction on and double click on it. The pull-down menus that appear when you start the product have nice Index and Help options. The Index option allows you to select a particular video or audio by breaking the skills down by a particular golf club or mental aspect. Unlike some titles, there is no searchable text. It would have been nice if a golf simulation or the rules of golf had been included.

Installation is straightforward and creates a separate program group with two icons, one for each of the two discs. The install program will want to modify your system configuration files. It does this not only to make the video play more smoothly, but also so that the QuickTime video play modules can be found. While the installation instructions are not very explicit about it, Intellimedia suggests using the highest color resolution (at 640 x 480) that your video card and Windows system resources will permit.

The minimum system requirements include a 25MHz 486, single-speed CD-ROM, and 4MB RAM, while the recommended requirements are a 33MHz 486, 8MB RAM, and a double-speed drive. I experienced no performance problems with the recommended requirements, but I did have a problem with a "washed out" look to the video at 256-color resolution. This disappeared at higher color resolution settings. (Intellimedia Sports, Inc., Suite 300, Two Piedmont Center, Atlanta, GA 30305. 1-800-269-2101)

Telecommunications Hardware Review

Konexx Koupler Model 204

Manufactured By: Unlimited Systems
List Price: $149
Reviewed By: Matthew Leeds

If you've ever been stuck in a hotel room trying to pry the phone connector off the wall so that you could jumper your modem into the phone system, or stood staring at the only pay phone for miles with no way to connect your laptop, the Konexx Koupler is a gift from heaven. It's an acoustic coupler that attaches to the handset of a phone and a phone cord with an RJ-11 plug that connects to your modem. The Koupler has a pair of adjustable rubber cups and a Velcro strap that insure a tight connection with just about any phone. The Koupler holds a standard 9V alkaline battery that powers it for over thirty hours.

According to Unlimited Systems, the Model 204 works at up to 14,400bps on electronic phones such as usually found with PBX systems (in fact you can't usually connect a modem to the digital lines used by modern PBXs). In my tests, I was able to get speeds up to 19,200bps. Older phones that use carbon-granule microphones, found in many pay phones, may only support speeds of 2400bps. The Model 204 weighs only 9 ounces and easily tucks into the corner of a laptop carrying case.

I did need to manually dial the phone and tell my modem to connect via an AT command, but this was easy to do and a small price to pay for essentially universal connectivity. Managing this on a pay phone may take a little patience, but it's far easier than tearing the handset apart, or hunting for one of the few pay phones that supply a modem jack.

Unlimited Systems sells other Konexx models. One is an acoustic coupler with a fax/modem built-in. Another is an interface into digital PBX phone lines for modems or fax machines. Many of the interface kits can be purchased in a deluxe version with additional phone cables with alligator clips, screwdriver, duplex RJ-11 adapter, and spare 9V battery. I highly recommend the Model 204 for road warriors who need to connect from everywhere. (Unlimited Systems, Inc., 8586 Miramar Pl., San Diego, CA 92121. 619/622-1400)

Newton Software Review

Time Reporter

Published By: Iambic Software, Inc.
List Price: $129
Reviewed By: Matthew Leeds

Anyone who has made the leap of faith in buying a Newton has made a commitment to keeping at least part of their life stored in electronic form. Iambic's Time Reporter brings a new level of organization and functionality to that storage. It's designed for professionals who need to track the time they spend during the day, particularly for those who bill their time.

Time Reporter requires 350K of free RAM, either on the Newton itself or on a PCMCIA card. It also requires the Connection Kit and either a Mac or Windows machine. Data created in Time Reporter can be transferred back to a PC or Mac in tab- or comma-delimited form.

Time Reporter links to the built-in Newton calendar or the Names file. You can add clients, projects, activities, or expense categories. The main interface is the Time Report. Here you can pop up a time entry screen for each line in the Time Report. Each time entry screen has pop-up menus for the client, project, activity, start and end times, date, and description of the entry.

Reports include the Client Breakdown, the total hours and percent of time spent with each client over a given time period; the Activity Breakdown, the total hours and percent of time spent on each activity over a given time period; and the Client Detail, the amount of time spent with or expenses for a given client. Reports can be printed, beamed, or faxed with the appropriate hardware connection.

Time Reporter has an elegant interface and takes less than an hour to get set up and learn. It makes an essential professional task easier to accomplish, and provides useful analysis and reports. (Iambic Software, Inc., 243 Buena Vista Dr., Suite 204, Sunnyvale, CA 94086. 408/730-0266)

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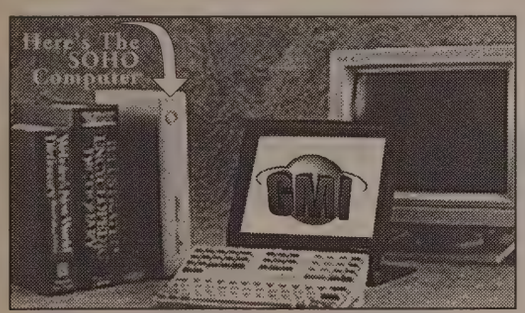

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MODEL	TERMINAL	486SX-25	486DX-33	486DX2-66
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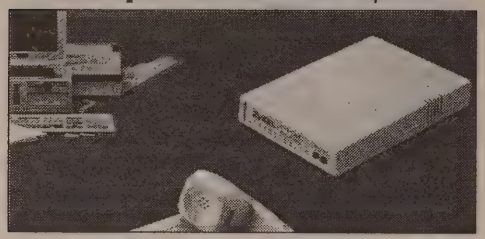

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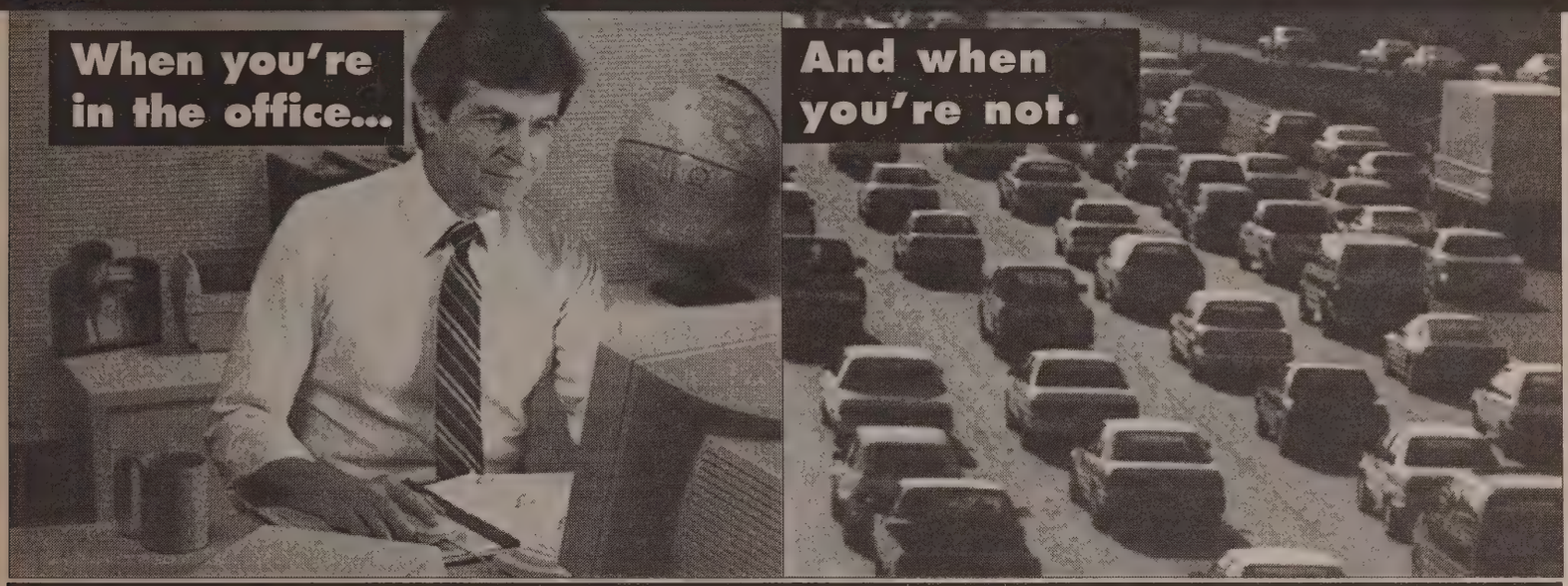

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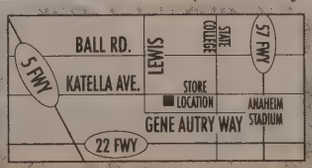

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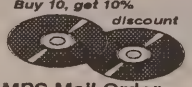

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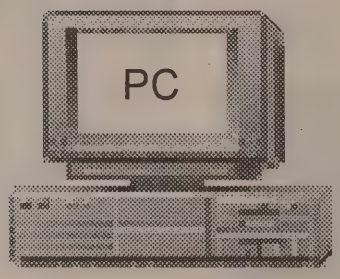

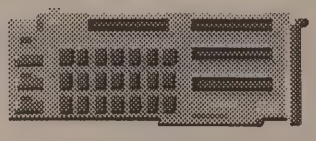

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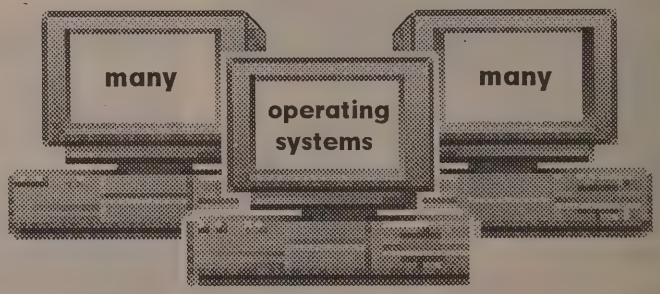

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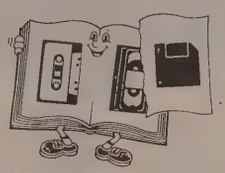

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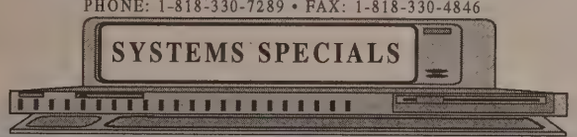

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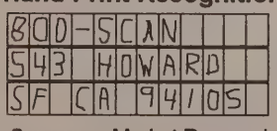

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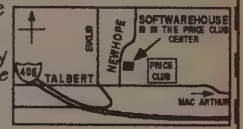

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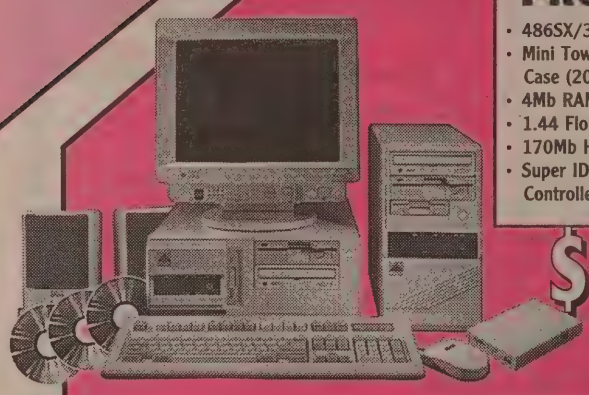

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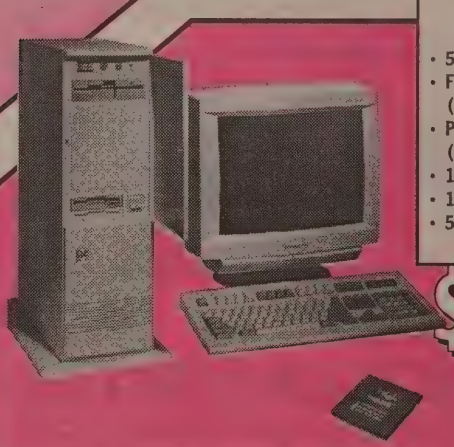

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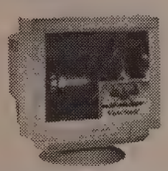

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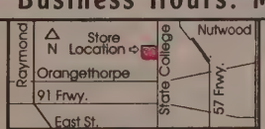

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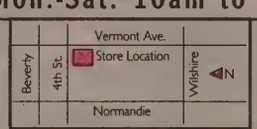

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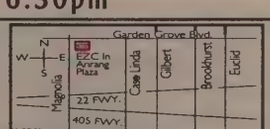

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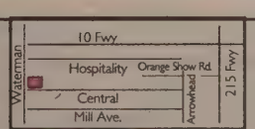

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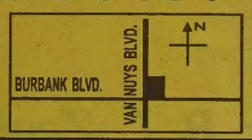

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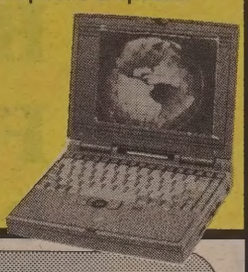

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This article orginally appeared in MicroTimes, May 11, 1992 Issue # 95

Bill Gates And No Sympathy For The Devil

Or An Interview With Mr. B. L. Zeebub— Astonishing True Story

BY JOHN C. DVORAK

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On April 15, 1992, I was granted an exclusive interview with the master of darkness, Mr. B. L. Zeebub, head honcho of the underworld, sometimes known as "Satan" or "the devil." Since I avoid association with his clan, he contacted me by MCI Mail to set up a meeting. He had learned that I was looking into various industry moguls who are believed to have made a deal with the devil, and that I had become something of an expert on the subject.

Because of an unusual deal he made with Bill Gates, Mr. Zeebub thought it would be good to have a meeting. We chose a neutral spot, the lobby of the San Francisco Marriott, to meet. The conversation was taped, and the following is an edited transcript.

DVORAK: So exactly why did you call for this meeting? I find this unusual.
ZEEBUB: It's quite out of the ordinary for me, too, but I have done quite a few deals with many of the richest men in high technology, and I want to go public with the information.

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DVORAK: Why? What difference does it make?
ZEEBUB: Not wanting to name names, I did a deal with Bill Gates, and it's causing some confusion and consternation with some of the other fellows.

DVORAK: Bill Gates? Don't tell me he sold his soul to become a billionaire?
ZEEBUB: Well, that's what we thought at first.

The deal was pretty straightforward. He's one of the richest men in the world and can have anything he wants. This is, of course, thanks to me. After he's dead I'm supposed to have certain rights that supersede normal procedure. Now we've discovered that this will never happen.

DVORAK: So he sold his soul to be rich?
ZEEBUB: It's not that simple. Gates is too smart for that kind of a deal. He's a tough negotiator. I think the contract is a bit unusual.

DVORAK: For example?
ZEEBUB: Well, his attorneys did a great job—and I admit this—making sure that he's protected from those notorious tricks you've heard so much about.

Gates' people made sure none of that kind of nonsense was allowable. We actually may have been premature when we signed it. He seems to have a lot of clauses my people didn't understand. We were so concerned with his soul that we didn't pay enough attention to his attorneys. The guy just doesn't look that threatening.

DVORAK: Uh, let me get this straight. You did a deal with Gates and the deal favored him?
ZEEBUB: Well, it actually may be worse than that. I'm not sure what to do about it.

Gates' deal has some interesting performance clauses and some fallback language that they slipped by us. Gates requires that his net worth increase $10 billion by the end of 1992 and then double each year for the next five years. It was written in such a way that we didn't see how the numbers were going to increase so fast.

My people are having a hell of a time, pardon my French, maintaining his wealth curve. We got him up to eight billion or so and can probably meet this year's requirements, but to double it again is going to be tough.

DVORAK: So throw in the towel. What's the big deal?
ZEEBUB: It turns out that if we don't perform, Gates gets my business.

DVORAK: What do you mean, "gets your business?"
ZEEBUB: Takes over the business. You know, like, owns it.

He gets all those contracts from me. Can you imagine what will happen when those guys who signed up with me from Sun Microsystems, for example, find out that Gates gets their souls!?!?

DVORAK: You mean he'd get their souls? Like for eternity? That kind of thing? What would he do with them? What about when he grows old and...
ZEEBUB: Oh, he's already immortal. That was another deal he did with an associate long ago. Bill Gates is 208 years old! If I had known about it I wouldn't have done this deal in the first place.

Anyway, I have no idea what he'd do with their souls. Auction them, I suppose. It's not them I'm worried about.

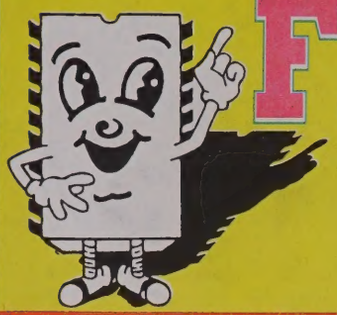
DVORAK: Who *are* you worried about?
ZEEBUB: Me. My counselors *now* tell me that if I go into default he will actually own *my* soul.

DVORAK: Wow. First the business, then the soul. How could such a thing happen? What would it mean to the scheme of things?
ZEEBUB: That's what we're trying to figure out. My long-term obligations to the universe and the good-evil continuum are in jeopardy. There's a rumor going around that Gates wants to parcel hell, put in a fake beach and sell condos. It's not that I care that much about the property. It's the principle of the thing.

DVORAK: So what's the point of this meeting?
ZEEBUB: Do you know any good lawyers?

DVORAK: I thought you had them all in hell.
ZEEBUB: They don't keep up with current cases.

Shortly thereafter I left Mr. Zeebub in the Marriott lobby. He looked depressed. I agreed to publish this interview as a plea for an attorney for the devil. I'm told the attorneys know how to get in touch with him. ■



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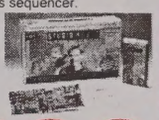

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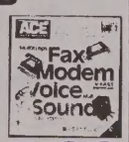

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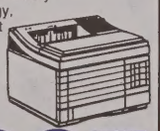

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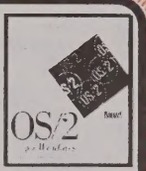

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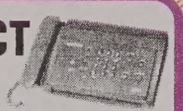

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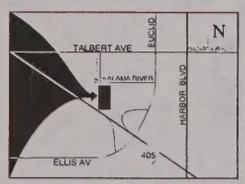

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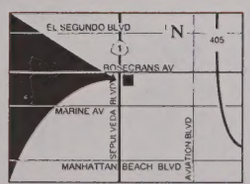

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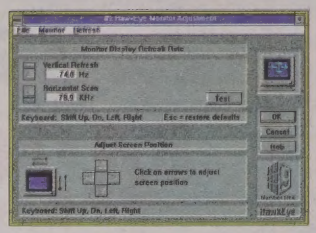
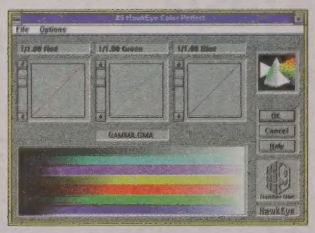
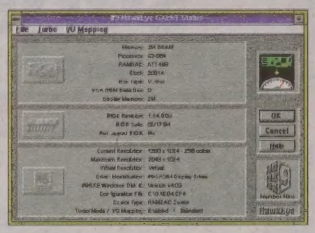


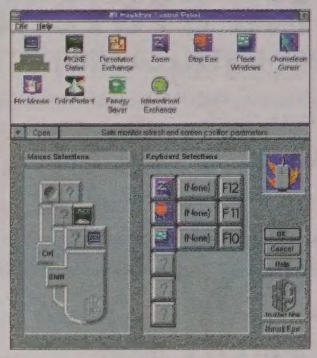
Monitor Adjustment: Fine tune your screen refresh to the peak performance of your monitor with easy push-button controls.



Color Calibration: Match screen tones to Pantones® or any other check-standard for color accurate pre-press results. (GXE64*Pro* only)



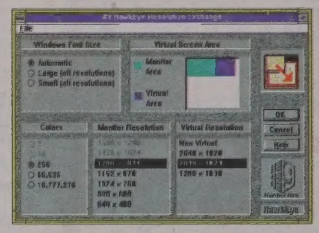
Instant Status: Hardware and software configuration data is immediately available to quickly pinpoint system state-of-health.



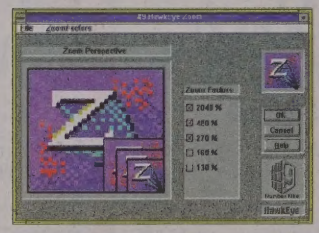
Hot Mouse: Instantly activate frequently used HawkEye for Windows applets by assigning them to mouse or keyboard hot keys.

vesa Local Bus

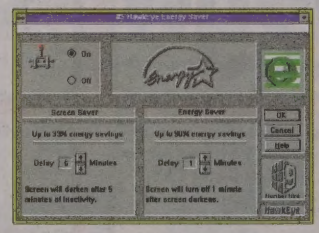
PCI



Resolution Exchange: An all-in-one resolution control center to easily select color depth, screen resolution and virtual desktop size.



Hardware Zoom: For close-up views, instantly magnify your screen up to five times normal size. Panning brings every pixel into view.



Energy Saver: DPMS-compliant power management conserves electricity and money by reducing energy loads up to 90%.

Number Nine

The Total Display Solution. You look for value in everything you buy. In PC graphics, there are many features that contribute to ultimate value. Reliability, performance, ease of use, affordability, visual clarity and system compatibility are all part of a total display solution. At Number Nine, we call this added value *HawkEye for Windows*.

HawkEye is our optimized Windows driver that controls over a dozen advanced display functions to help you work smarter. We pioneered display applets to push all our cards to their full visual potential.

HawkEye is quick, easy to install and very intuitive to use. It will open you to the world of the virtual desktop, tune your monitor to its peak performance, conserve energy, select your favorite video modes and control almost every aspect of the display environment.

With so many graphics boards vying for your attention, only one includes the value of HawkEye. The #9GXE64 family with HawkEye for Windows. The *affordable* 64-bit graphics accelerators with a real difference.

Display Modes	Pixel Clock		Screen Resolutions						Virtual Desktops	
			1600x1200	1280x1024	1152x864	1024x768	800x600	640x480	2048x1024	1600x600
#9GXE64 1 MB DRAM **S3-864**	135 MHz	Color	-	-	256	256	65K	16M	-	256
#9GXE64 2 MB DRAM **S3-864**	135 MHz		-	256	256	65K	16M	16M	256	65K
#9GXE64*Pro* 2 MB VRAM **S3-964**	**135 MHz**		-	256	256	65K	16M	16M	256	65K
#9GXE64*Pro* 4 MB VRAM **S3-964**	**135 MHz**		256	65K	16M	16M	16M	16M	65K	16M

A variety of virtual desktop modes are available, including 2048 by 2048 on 4MB #9GXE64*Pro*

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